Universidad Politécnica de Cartagena

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Estudio de stress y soportación de una tubería enterrada de 26” para un almacenamiento subterráneo de gas natural con una presión de operación de 310 bar.

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Titulación: Ingeniería Industrial

Intensificación:

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Cartagena, 5 de SEPTIRMBRE de 2014

RESUMEN

Existen 627 almacenamientos subterráneos de gas natural en el mundo, 81 de los cuales son acuíferos salados profundos, incluido uno bajo el casco urbano de Berlín. El primero data de 1915.

El almacenamiento de gas está presente en la naturaleza desde hace millones de años. Un proceso que trata de aprovechar una formación natural como almacenamiento subterráneo. Una instalación concebida y desarrollada bajo los mayores estándares de seguridad y respeto al medio ambiente, que cumplirá funciones clave para el Sistema Gasista: modular las diferencias de consumo entre los meses de verano y de invierno y mantener un colchón de reservas estratégicas. En definitiva, contribuir a la garantía de suministro de gas natural.

España importa prácticamente la totalidad del gas natural que consume y su capacidad de almacenamiento es escasa, aproximadamente el 10% de la de otros países europeos de nuestro entorno.

Cómo funciona un almacenamiento

El gas natural es almacenado a más de 1.000 metros de profundidad en un acuífero salino o en yacimientos agotados de gas o petróleo. El gas inyectado desplaza el agua que rellena los poros de la roca almacén, que está sellada por una capa superior de roca impermeable.

Proceso

· Inyección.

En verano se inyecta el gas comprimido en un acuífero salado profundo

· Producción

En invierno se extrae el gas. El agua vuelve a rellenar los poros del acuífero. El gas es tratado y enviado a la red de gasoductos.

Es en esta etapa de inyección donde se consiguen las mayores presiones, puesto que los almacenamientos naturales se encuentran a una presión de unos 300 bares lo que es necesario superarla para que se consiga un flujo de gas hacia los mismos.

Aquí es donde centramos nuestro estudio en el diseño dimensionamiento e implantación en campo del colector de alta presión de gas, desde aspiración a los compresores etapa de media hasta impulsión o etapa de alta.

INDICE

1. INTRODUCCIÓN

El presente Proyecto Fin de Carrera se enmarca dentro de la especialidad de la ingeniería dedicada al cálculo de flexibilidad en sistemas de tuberías, incluyendo un estudio de un sistema real.
Los sistemas de tuberías están muy presentes en las plantas industriales y son de especial importancia en plantas dedicadas el sector petroquímico o del refino por la gran cantidad de sistemas de tuberías que en ellas aparecen.
Los análisis de flexibilidad, por el marco industrial en que se sitúan, están relacionados con especialidades muy diversas y diferentes entre sí. Se relaciona, entre otras, con la metalurgia por los materiales empleados, con la mecánica de medios continuos o con la neumática y oleohidráulica por ser sistemas que transportan fluidos con unas condiciones de temperatura y presión determinadas y en muchos casos críticas.
Los sistemas de tuberías son el elemento de conexión entre los distintos equipos de la planta y sirven de medio de transporte para los diferentes fluidos que intervienen en los procesos que la planta realiza. Por ello, es necesario realizar los análisis de flexibilidad que garanticen que los sistemas operarán de forma segura, sin roturas o deformaciones excesivas de sus elementos.
Asegurando la operación de la planta sin roturas se garantiza también la seguridad de los operarios que desempeñen su labor en ella, siendo este un factor importante a la hora de la construcción de una planta industrial y, en general, de cualquier proyecto de ingeniería.
Del análisis de flexibilidad se obtienen los datos necesarios para realizar la suportación de la línea, como son las restricciones necesarias, su localización y las cargas que sufrirán los soportes y para las cuales deberán estar diseñados.
El análisis de flexibilidad se debe realizar teniendo en cuenta las posibilidades que ofrecen los soportes. De esta forma no se dispondrá una restricción que requiera de soportes no construibles. Por esa importancia que tiene el conocimiento de los soportes a la hora de realizar los cálculos de flexibilidad se hablará también de los tipos de soportes típicos más utilizados en los sistemas de tuberías.

1.1. OBJETIVO

El presente proyecto tiene como objetivo central la realización de un análisis de flexibilidad de un sistema de tuberías real.
Para ello será fundamental también el manejo de información obtenida a partir de planos de equipos, normas internacionales y otros documentos técnicos de los que se hablará a lo largo del proyecto.
La presentación de los resultados de un estudio de forma clara e inequívoca es muy importante en un trabajo de ingeniería en el que se ven implicadas varias especialidades. Por ello también se pretende completar el estudio de la línea real de forma que sus resultados sean expuestos con la claridad necesaria para facilitar la labor de los responsables de utilizar esa información a posteriori.

Como complemento del análisis de flexibilidad de la línea real se pretende exponer el marco industrial en el que se encuentra dicho análisis, así como sentar las bases de la tarea de los especialistas de soportes que son quienes utilizarán la información que se obtenga del estudio de flexibilidad que supone el tema central del presente proyecto.

1.2. ESTRUCTURA

Como se ha visto, hasta este punto se ha pretendido realizar una introducción del tema fundamental de este proyecto, así como una explicación de los contenidos y estructura del mismo para una mejor comprensión y un seguimiento más fácil de la información.
En el capítulo 2 se exponen los conceptos previos que es necesario conocer para entender los análisis de flexibilidad.
En el capítulo 3 aparece toda la información sobre los análisis de flexibilidad, explicando los aspectos necesarios para su desarrollo. De esta forma se habla de los esfuerzos que aparecen en un sistema de tuberías, cómo se analizan esos esfuerzos dependiendo del tipo de línea y de los equipos que estén conectados a ella, cómo minimizar dichos esfuerzos, la normativa aplicable y, así, todos los aspectos necesarios para el buen desarrollo de este tipo
de análisis.
Como se ha mencionado en los puntos anteriores, muy relacionado con los análisis de flexibilidad está la especialidad de soportes encargada de diseñar los mismos para conseguir las restricciones que el ingeniero responsable de realizar el análisis de flexibilidad indica en su estudio como necesarias para el buen funcionamiento, de forma segura, de la línea. Por ello en el capítulo 4 se hace una introducción a los tipos de soportes utilizados en las plantas industriales.
Un estudio completo con recopilación de la información necesaria, el estudio propiamente dicho y la presentación de un informe de resultados son los temas principales incluidos en el capítulo 5.
Finalmente se muestran las conclusiones junto con los anexos correspondientes a los planos de los equipos, lista de líneas, diagramas de tuberías e instrumentos, y planos isométricos de la línea estudiada (capítulo 8).

2. SISTEMAS DE TUBERÍAS - CONCEPTOS PREVIOS

Los sistemas de tuberías deben ser concebidos como parte de los procesos para los que están diseñados. Así, estos sistemas sirven ante todo para transportar los productos o fluidos de apoyo que deben intervenir en dichos procesos. En este sentido, el sistema de tuberías tiene una doble función, transporte y control de los fluidos para que el proceso se lleve a cabo correctamente.

2.1. DIAGRAMAS DE TUBERÍA E INSTRUMENTOS

La representación principal del sistema de tuberías son los diagramas de tubería e instrumentos (P&ID's en sus siglas en inglés). Se trata de una representación esquemática de la interconexión de las tuberías con los instrumentos y los distintos equipos.
Los P&ID's incluyen información sobre los instrumentos y su denominación, los equipos mecánicos y su denominación, las válvulas, las tuberías con tamaño e identificación, dirección del flujo, datos sobre la forma de operar el proceso y todas las instalaciones auxiliares como reductores, tomas de muestras, ventilación, desagües, etc.

2.2. EQUIPOS

Desde el punto de vista del análisis de flexibilidad es importante conocer los tipos de equipos que se conectan a los sistemas estudiados. Estos equipos pueden ser, principalmente, equipos a presión (horizontales o verticales), intercambiadores de calor, bombas centrífugas, compresores centrífugos, compresores alternativos, hornos, turbinas, enfriadores por aire y tanques de almacenamiento.

2.3. MATERIALES

También es importante conocer los elementos físicos que constituyen el sistema de tuberías en la realidad, dado que las características reales del sistema serán las que determinen su comportamiento cuando la planta sea puesta en marcha [1 y 3].

De estos elementos físicos, la tubería propiamente dicha es el componente principal en los sistemas. Se caracteriza por su diámetro nominal y el espesor de pared (calculado a partir del material y las condiciones de presión a las que estará sometido durante la operación del sistema), el material base que la compone, el tipo de fabricación (con soldadura o sin ella), su norma de fabricación (garantiza las características del material), la forma de sus extremos (roscado, plano, biselado) y otros requisitos especiales en caso de que sean necesarios como puede ser un tratamiento térmico, un acabado con recubrimiento, etc.
Las válvulas son otro de los elementos principales. Las hay de muchos tipos dependiendo del efecto sobre el fluido (de corte, de retención o de regulación), del tipo de fabricación (forjada o fundida), o dependiendo de la forma de conexión en sus extremos (enchufe y soldadura, soldadas a tope, bridadas, roscadas, etc.). En la figura 2.1 se muestran algunos ejemplos.

Figura 2.1. Válvulas

Las bridas sirven de elemento de unión en los casos en los que no se desea una conexión permanente debido a que puede ser necesario desconectar esas uniones para mantenimiento de la línea o de los equipos, sustitución de válvulas o cualquier otra operación.
Existen de varios tipos (brida ciega, de cuello, roscada, de enchufe y soldadura, etc.). En la figura 2.2 se muestran varios ejemplos.
Los accesorios, como los de la figura 2.3, son elementos de unión como pueden ser las uniones en "T", los codos, los reductores, las cruces, los tapones, los acoplamientos, etc.

Figura 2.2. Bridas

Figura 2.3. Accesorios

Las juntas sirven para asegurar la impermeabilidad de las uniones bridadas. En la figura 2.4 se muestran algunos ejemplos.

Figura 2.4. Juntas

Existen otros elementos que no se pueden clasificar en ninguno de los grupos anteriores y que se engloban como “miscellaneous”. Se trata de elementos como purgadores, filtros o figuras en 8 (elemento doble que según la posición hace el efecto de una brida ciega o deja pasar totalmente el fluido), representadas en las figuras 2.5 a 2.7.

Figura 2.5. Filtro

Figura 2.6 Purgadores

Figura 2.7 Figuras en 8

3. ANÁLISIS DE FLEXIBILIDAD

La flexibilidad es la propiedad de un material para deformarse dentro de su límite elástico por efecto de cargas externas.
En un sistema de tuberías, las cargas externas que se pueden encontrar y que se deben someter a estudio son los efectos térmicos, sostenidos y ocasionales. Los esfuerzos producidos por estas cargas sobre el sistema de tuberías serán detallados en el apartado 3.3.
Los efectos perjudiciales que estas cargas pueden ocasionar son:

- Esfuerzos excesivos en tuberías, soportes, estructuras y equipos.
- Fugas en juntas bridadas.
- Deformaciones excesivas en tuberías y en boquillas de equipos.

- Aparición de efectos de resonancia en los sistemas sometidos a vibraciones.

El análisis de flexibilidad tiene como fin evitar estos efectos dañinos, garantizando la integridad mecánica del sistema de tuberías como tal y de los distintos elementos (equipos, estructuras, soportes, etc.) asociados al mismo. De esta manera se pretende garantizar, también, la integridad y seguridad del personal que opera la planta.

3.1. NORMATIVA APLICABLE

Las normas, códigos y estándares internacionales y locales, que son de aplicación a cada proyecto, son establecidos por el propietario de la instalación según considere cuáles se ajustan más a la aplicación del proceso a desarrollar.
La definición de la normativa aplicable se realiza en colaboración con el grupo de ingeniería que desarrolla la fase conceptual del proyecto y queda fijado en las bases de diseño del mismo.
Se deberán seguir las pautas de la normativa de aplicación ya que será el cumplimiento de esta normativa el que avale el trabajo de los ingenieros y aclare responsabilidades en caso de accidente.

3.2 ESFUERZOS EN TUBERÍAS

En el análisis de un sistema de tuberías existen cuatro tipos de esfuerzos que deben ser verificados. El primero es el esfuerzo circunferencial debido a la presión. El análisis de este esfuerzo se escapa a las atribuciones del analista de flexibilidad, siendo los ingenieros encargados de establecer las especificaciones de materiales los que deberán verificar este aspecto como se indicó en el apartado 2.3. Los tres tipos de esfuerzos restantes sí han de ser verificados por el analista de flexibilidad y se definen a continuación.

3.2.1. Esfuerzos sostenidos o primarios

Son aquellos esfuerzos longitudinales que se producen por cargas sostenidas (peso de la tubería, peso del aislamiento, peso del fluido, fuerzas concentradas y distribuidas, momentos aplicados y presión interna). Se trata de esfuerzos no autolimitantes de forma que su acción es suficiente para causar deformación plástica o rotura inminente del material. El control de estos esfuerzos es sencillo mediante un buen soportado del sistema. Los esfuerzos sostenidos, que deberán compararse con el esfuerzo máximo admisible del material, se calculan de la siguiente forma:

$$Sl = A \cdot \frac{P \cdot D_0}{4 \cdot t} + B \cdot \frac{i \cdot M_a}{Z}$$

Donde:

Sl es el esfuerzo sostenido a calcular.

A y B son constantes adimensionales que dependen del código utilizado.
Según ASME B31.3 (aplicable a los sistemas de los que se hablará a partir de este punto) el valor de las dos constantes es 1.
P es la presión interna de la tubería.
D0 es el diámetro externo de la tubería.
t es el espesor de la tubería (espesor al cual se le resta el espesor de corrosión, tolerancia de fabricación y el factor de soldadura si aplica).
i es el factor de intensificación de esfuerzos correspondiente según ASME B.31.3.
Ma es el momento flector debido a las cargas sostenidas.
Z es el módulo de sección de la tubería.

3.2.2. Esfuerzos por expansión o secundarios

Son aquellos producidos a causa de la expansión o contracción del material debido a los cambios de temperatura. Para controlar estos esfuerzos cuando son excesivos es necesario variar el diseño del sistema y de las restricciones impuestas sobre él, para que este sea más flexible.
Los esfuerzos secundarios son esfuerzos autolimitantes ya que se alivian con el paso del tiempo debido a la relajación térmica del material tras los primeros ciclos de carga-descarga térmica. El carácter cíclico de las cargas térmicas abre la posibilidad a una rotura por fatiga. Esta rotura será más probable en los puntos de intensificación de tensiones como soldaduras en uniones en “T”, codos y en general en cualquier unión soldada. Por eso se incluirá en los puntos críticos un factor de intensificación de tensiones (SIF en sus siglas en inglés) al realizar los estudios. Según ASME B31.3 el esfuerzo de expansión (SE) se obtiene de la siguiente forma:

$$S_E = \sqrt{S_b^2 + 4 \cdot S_t^2}$$

$$S_t = \frac{M_t}{2 \cdot Z}$$

$$S_b = \frac{\sqrt{(i_i \cdot M_i)^2 + (i_0 \cdot M_0)^2}}{Z}$$

Donde:
Sb es la resultante de todos los esfuerzos por flexión.
St es el esfuerzo torsor.
i es el factor de intensificación de tensiones correspondiente según ASME B.31.3.
M es el momento flector.

Z es el módulo de sección de la tubería que en caso de la reducción en una T reductora se calcula a partir del radio medio del área transversal del ramal o reducción (“r ”) y del espesor de pared efectivo en la reducción (“T ”) de la siguiente forma:

$$Z = \pi \cdot r \cdot T$$

Los subíndices se refieren a los factores de intensificación de tensiones y momentos flectores dentro (subíndice i), fuera (subíndice o) y en el plano (subíndice t) según se muestra en las figuras 3.1 y 3.2.

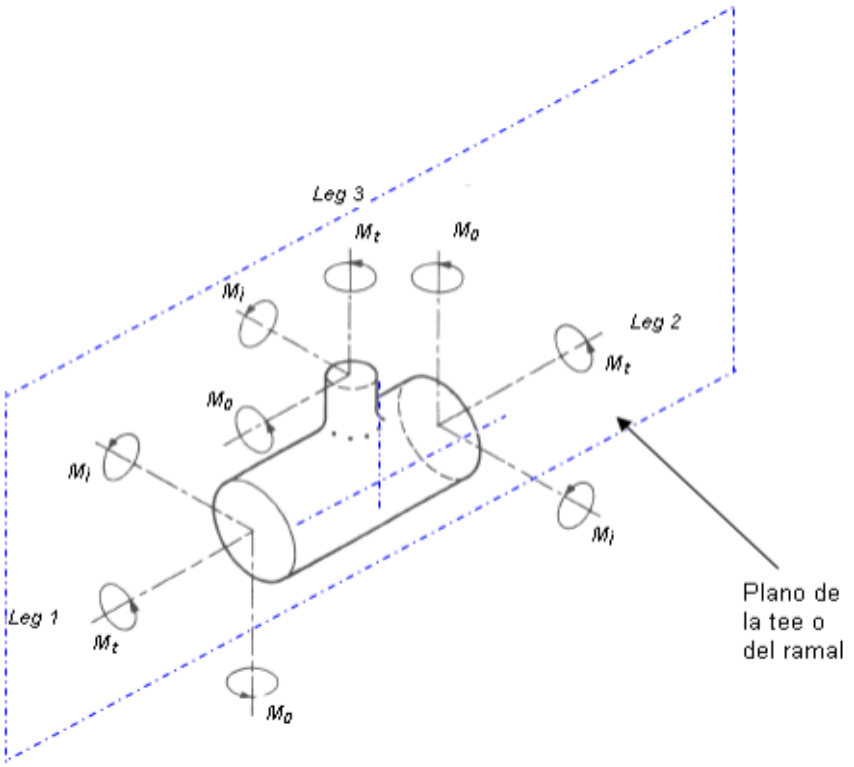

Figura 3.1. Sentido de los momentos sobre una unión en “T”.

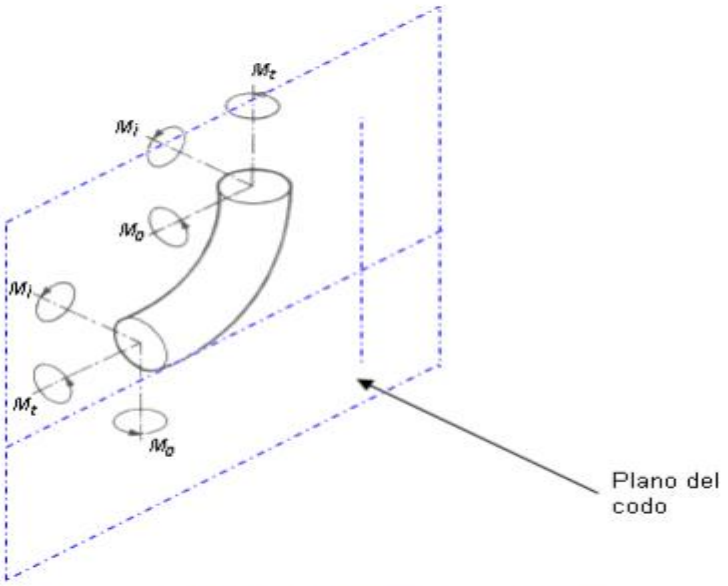

Figura 3.2. Sentido de los momentos sobre un codo.

El esfuerzo admisible con el que hay que comparar el esfuerzo secundario se calcula según ASME B31.3 de la siguiente forma:

$$S_a = f \cdot (1.25 \cdot S_C + 0.25 \cdot S_h)$$

Donde:
Sa es el esfuerzo máximo admisible para los esfuerzos secundarios.
f es un factor de fatiga proporcionado por la norma ASME B31.3. (Su valor máximo con bajo número de ciclos es de 1.2 para materiales férreos con S MPa U ≤ 517 y con temperatura del metal ≤ 371ºC).
Sc es el esfuerzo básico admisible del material a temperatura ambiente.
Sh es el esfuerzo básico admisible del material a temperatura de estudio.
Si el esfuerzo básico admisible a temperatura de estudio (Sh) es mayor que el esfuerzo sostenido (Sl), se puede añadir la diferencia a la relación anterior de la siguiente forma:

$$S_a = f \cdot (1.25 \cdot S_C + 0.25 \cdot S_h + S_h - Sl) = f \cdot [1.25 \cdot (S_C + S_h) - Sl]$$

3.2.3. Esfuerzos ocasionales o terciarios:
Estos son ocasionados por causas eventuales como su nombre indica. Estas causas pueden ser el viento, sismo, descarga de válvulas de alivio, golpes de ariete y vibraciones. Según ASME B31.3 deben ser comprobados de forma que cumplan la siguiente relación:

$$Sl_{sus} + Sl_{occ} \leq 1.33 \cdot S_h$$

Donde:
Sl sus es el esfuerzo longitudinal debido a las cargas primarias o sostenidas.
Slocc es el esfuerzo longitudinal debido a las cargas ocasionales.
Sh es el esfuerzo básico permisible a la temperatura de evaluación del material.

3.3. CATEGORIZACIÓN DE LAS TUBERÍAS

La categorización de las líneas consiste en definir qué grado de criticidad tienen para establecer qué tipo de estudio y con qué grado de detalle es necesario realizar.
Esta categorización se realiza en última instancia según la experiencia del analista encargado de esta tarea pero en una primera aproximación la categoría de las líneas se establece por las condiciones de operación y diseño (temperatura y presión), los equipos conectados a ellas, el tipo de fluido que transportan, etc.
Esto permite catalogar las líneas en cuatro niveles o categorías, siendo la de mayor grado de criticidad la categoría I y la menos crítica la categoría a IV como se indica a continuación.

3.3.1. Categoría I
Se trata de líneas de alta criticidad que deben ser señaladas al principio del proyecto, realizando incluso estudios previos para tener en cuenta su posible suportación durante el proyecto.
En la ingeniería de detalle se realizarán estudios más minuciosos y definitivos de estas líneas. En esta categoría se incluyen:

- Líneas de alta presión.
- Líneas de trasferencia a hornos.
- Líneas de gran diámetro (≥48” ó D/t>100).
- Líneas de transporte de fluidos críticos por toxicidad, inflamabilidad, etc., incluidos en la categoría M según ASME B31.3.
- Líneas de gas natural licuado (LNG).
- Líneas con juntas de expansión.
- Líneas con temperaturas superiores a los 400 ºC.
- Líneas sometidas a fatiga con más de 22000 ciclos.
- Líneas de categoría II que a juicio del analista deben someterse a un estudio más exhaustivo.

3.3.2. Categoría II

Se trata de líneas con un grado de criticidad menor que las de categoría I pero que en todo caso deben someterse a un análisis formal mediante software de simulación. Son las siguientes:

- Líneas conectadas a bombas y compresores alternativos o centrífugos y turbinas que cumplan las siguientes especificaciones:

Diámetro nominal menor a 3” y temperatura de diseño mayor que 65ºC ó menor que 6ºC.
Diámetro nominal mayor a 12” y temperatura de diseño mayor que 50ºC ó menor que 6ºC.

- Líneas conectadas a enfriadores por aire.
- Líneas conectadas a recipientes a presión.
- líneas conectadas a hornos y calderas.
- Líneas sometidas a vibraciones.
- Líneas sometidas a fatiga con menos de 22000 ciclos.
- Líneas conectadas a cajas frías.
- Líneas conectadas a equipos de aluminio.
- Líneas sometidas a cargas ocasionales importantes y que requieran de algún análisis dinámico.

3.3.3. Categoría III

Las líneas de esta categoría deben ser analizadas pero será suficiente con un cálculo manual sin necesidad de usar simulaciones por ordenador. Sin embargo, si los cálculos dan como resultado la necesidad de realizar cambios en el diseño de la línea, sí habrá que avalar esos cambios con un cálculo formal por ordenador ya que los métodos manuales son más conservadores y un cálculo más formal puede evitar que se realicen cambios de diseño innecesarios. Los tipos de métodos de estudio se verán en el apartado 3.5. En la categoría III se incluyen las siguientes líneas:

- Todas las líneas conectadas a equipos sensibles que no estén incluidas en la categoría II.
- Líneas catalogadas como Power Plant Piping según ASME B31.1.

3.3.4. Categoría IV

En esta categoría se incluyen las líneas que necesitan únicamente un análisis visual como son:

- Líneas que sustituyan a líneas existentes sin cambios significativos.
- Líneas con arreglos iguales a otras existentes en la planta y con las mismas condiciones de operación y diseño.
- Líneas que por semejanza a estudios previos pueda desestimarse efectuar un nuevo cálculo.

3.4 MÉTODOS DE ESTUDIO

Para realizar el análisis de flexibilidad de un sistema de tuberías que necesita, por su categoría, la realización de un cálculo formal y unos resultados precisos, se dispone de métodos de análisis mediante software especializado como “CAE PIPE”, “FE PIPE” o

"CAESAR II".
Estos programas, internamente, se basan en el estudio de esfuerzos tal y como se indicó en el apartado 3.2. Por esto, es fundamental que un buen analista de flexibilidad conozca esa base teórica, para poder realizar una introducción de datos correcta al programa así como un buen análisis de los resultados que se obtendrán del cálculo.

Además de los métodos computerizados, existen los siguientes métodos manuales que pueden ser suficientes para el análisis de una línea si por su categoría de criticidad así se considera.
Por lo general, los métodos manuales son métodos más conservadores que los métodos computerizados debido a que el cálculo es menos detallado y necesita un margen de seguridad mayor. A continuación se describen algunos de los métodos manuales más útiles.

3.4.1. Método "Simple" de la norma ASME B31.3

La norma ASME B31.3 proporciona una expresión empírica que se utiliza en sistemas uniformes con no más de dos puntos de fijación. Esta expresión permite comprobar si un sistema es flexible.

Para asegurar que un sistema es flexible se debe cumplir la siguiente relación:

$$\frac{D \cdot y}{(L-U)^2} \leq K_1$$

Donde:

D es el diámetro exterior de la tubería [mm] ó [pulg.]

y es la resultante de la expansión total [mm] ó [pulg.] (en caso de que exista desplazamiento de los puntos de anclaje se tendrá en cuenta en los incrementos de longitud en cada eje según corresponda). El cálculo de esta expansión total se realiza de la siguiente forma:

$$y = \left(\Delta x^2 + \Delta y^2 + \Delta z^2\right)^{1/2}$$

L es la longitud total de tubería entre dos anclajes [m] ó [pies].

U es la distancia en línea recta entre los dos anclajes [m] ó [pies].

K1 es una constante cuyo valor es igual a 208000 Sa/Ea (mm/m2) ó 30 Sa/Ea (pulg/pies2). Para una temperatura de referencia de 21ºC (70ºF) se tiene para los aceros un valor de esta constante igual a 208 en unidades internacionales y 0.03 para unidades inglesas.

Como se ve en la expresión, un mayor diámetro supone una tubería menos flexible y por lo tanto que es capaz de absorber menos expansión térmica. La diferencia entre la longitud de tubería y la distancia entre los extremos es una forma de cuantificar los tramos de tubería que se sitúan perpendicularmente a la dirección de la expansión térmica. Si la tubería es demasiado recta entre los dos anclajes, será también menos flexible.

Este método no permite calcular numéricamente esfuerzos o cargas ya que, como se ha visto, se basa en una expresión empírica que consiste en una comprobación basada en la geometría de la tubería, sin realizar ningún cálculo de esfuerzos.

3.4.2. Método de Quy Truong

Es un método que también dispone de ecuaciones con factores empíricos y que está basado en las siguientes consideraciones:

- Los sistemas deben ser de espesor uniforme, con dos puntos de fijación sin restricciones intermedias, con tramos rectos y cambios de dirección de 90º.

- Se tiene en cuenta que la expansión térmica en un brazo debe ser absorbida por el brazo perpendicular siendo la expansión que un brazo puede absorber inversamente proporcional a su rigidez.

- No deben existir ramales. En caso de existir ramales, deberán ser de diámetro menor a la mitad del diámetro del cabezal para poder ser despreciado el efecto que estos causan.

- Los esfuerzos máximos que se pueden generan en los sistemas cuando se conectan a distintos equipos varían.

Con estas premisas se tienen dos expresiones para calcular el brazo necesario, perpendicular a la dirección de la expansión térmica:

- Para líneas conectadas a recipientes o líneas situadas en racks:

$$L = 7.2 \cdot \sqrt{\Delta \cdot D}$$

- Para líneas conectadas a bombas o compresores:

$$L = 12.45 \cdot \sqrt{\Delta \cdot D}$$

Donde,

L es la longitud del brazo perpendicular necesario [pies]

Δ es la expansión de la tubería [pulg.]

D es el diámetro exterior de la tubería [pulg.]

Existen otros métodos que permiten calcular los esfuerzos en las restricciones como el método del Guided Cantilever, sin embargo, en la práctica, cuando es necesario cálculo de esfuerzos en

restricciones por ser boquillas de equipos o casos similares, se recurre a cálculos formales con sistemas de simulación informática. De esta forma, con los métodos descritos anteriormente es suficiente para un primer chequeo de las líneas de criticidad baja que admiten un simple cálculo manual.

4 TIPOS DE SOPORTES Y APLICACIÓN

Como se ha indicado con anterioridad, el analista de flexibilidad debe tener unos conocimientos mínimos sobre los soportes que se emplean habitualmente. Dependiendo de cada proyecto existirá un estándar de soportes que el analista debe conocer ya que algunos tipos de soportado tienen limitaciones en cuanto a dimensiones, material y usos. Un conocimiento previo de los soportes típicos facilitará el hecho de familiarizarse con cada estándar concreto en cada proyecto.

Los soportes son elementos que se emplean como apoyo para la tubería o que ofrecen

una restricción a su movimiento.

Su construcción es, en la mayoría de los casos, a partir de acero estructural (perfiles,placas, barras, etc) junto con secciones de la propia tubería o elementos útiles comoabrazaderas, orejetas, U-Bolts, tornillos, pernos, etc. En las figuras 4.1 y 4.2 se muestran ejemplos de este tipo de elementos.

Figura 4.1. Acero estructural.

Figura 4.2. Útiles de suportación

4.1 SOPRTES ESTRUCTURALES

Se trata de soportes anclados a piso, a estructuras existentes (hormigón o acero) o a equipos (mediante clips soldados) que sirven como apoyo para las tuberías o para otros elementos de soporte que restringen el movimiento de éstas. Sus configuraciones más habituales son los

cristos, trapecios, pórticos y ménsulas. En las figuras 4.3 y 4.4 se muestran ejemplos de soportes estructurales.

Figura 4.3. Soporte sobre clips soldados a equipo.

Figura 4.4. Soporte estructural a piso (cristo).

4.2 SOPORTES PARA PROTECCIÓN DEL APOYO.

Cuando se trata de una tubería de gran diámetro puede ser necesario soldar cunas o silletas para evitar la deformación por aplastamiento como es el caso indicado en la figura 4.5. Además, estos elementos pueden ser necesarios para evitar la corrosión en el punto de apoyo.

Figura 4.5. Cuna soldada para apoyo.

4.3. SOPORTES PARA CONTROL DE DESPLAZAMIENTO.

Las tuberías pueden sufrir desplazamientos laterales o longitudinales. Para restringir el desplazamiento lateral de un punto de la línea se usan guías. Estas pueden ser para tramos verticales, como es el caso de la guía de la figura 4.7 u horizontales como se muestra en lafigura 4.6.

Figura 4.6. Guía horizontal.

Figura 4.7. Guía vertical.

Para restringir el movimiento longitudinal de un punto de la tubería se usan anclajes direccionales, también conocidos como stops. En la figura 4.8 se pueden ver algunos ejemplos de este tipo de anclaje.

Figura 4.8. Anclajes direccionales (*Stops*).

Las guías y los anclajes direccionales se pueden combinar en un punto para evitar que éste se desplace en ambas direcciones.

4.4. SOPORTES PARA APOYO

En las líneas aisladas es necesario colocar zapatas a la tubería de forma que salven el espesor de aislamiento. Se trata por lo general de elementos soldados a la tubería, como se ve en la figura 4.9, aunque en casos excepcionales, como pueden ser las tuberías de acero galvanizado, se evita la soldadura mediante el uso de zapatas con abrazaderas similares a la presentada en la figura 4.10.

Figura 4.9. Zapata soldada.

Figura 4.10. Zapata con abrazaderas.

4.5. SOPORTES ELÁSTICOS

Existen líneas que en determinado punto de apoyo se necesita permitir un desplazamiento vertical. Para este control simultáneo de carga y desplazamiento se dispone de soportes elásticos que pueden ser de carga variable (muelle) o de carga constante (muelle con sistema de palancas). En las figuras 4.11 y 4.12 se muestran dos ejemplos.

Figura 4.11. Muelle de apoyo.

Figura 4.12. Muelle colgado.

. Otros elementos de suportación

Existen otros elementos de soportado utilizados para casos más concretos y con una construcción más específica. Estos elementos son los siguientes:

- Soportes antivibracionales: Se usan en líneas en las que existe riesgo de que el material entre en resonancia. Tienen elementos que rigidizan la línea absorbiendo las vibraciones.

- Soportes acústicos: Son soportes que por su construcción están destinados al control de ruidos.

- Amortiguadores: Se trata de soportes que absorben posibles impactos producidos en la línea por efectos hidráulicos como puede ser el golpe de ariete.

- Placas deslizantes: Son placas que se sitúan en el punto de apoyo para reducir los efectos de fricción. Las más usadas son las de teflón aunque si las condiciones de temperatura impiden el uso de éstas (temperaturas superiores a 200ºC) se usan placas de grafito-bronce.

- Soportes ajustables: Para los primeros soportes en líneas conectadas a equipos rotativos es necesario en ocasiones colocar soportes ajustables que favorezcan la alineación de la tubería con el eje de giro del equipo.

Estos soportes son una variante de los habituales (principalmente de los pedestales) que incluyen una serie de elementos unidos por tornillos que permiten su ajuste en altura.

- Otros: Las posibilidades que ofrecen los elementos de los que están construidos los soportes son tantas que, dependiendo del soporte concreto y de la criticidad del mismo para la flexibilidad de la línea, se pueden diseñar soportes especiales según crea conveniente el ingeniero al cargo.

5. ESTUDIO COMPLETO DE LÍNEA

5.1. DESCRIPCIÓN DE LA LÍNEA A ESTUDIAR

El presente estudio engloba todos los cálculos y comprobaciones necesarios para el análisis de estrés de la línea representada en el modelo 3D de la figura 5.1.

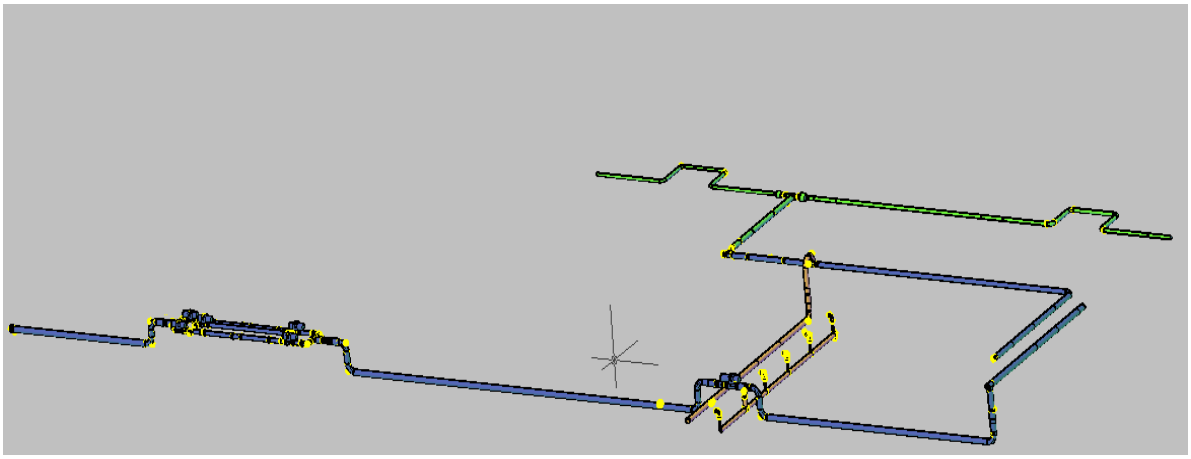

Figura 5.1 modelo 3D

Se trata de una línea de agua templada de apoyo al proceso, de diámetros iguales a

30” y 26” según el tramo, que une con el gaseoducto tramo azul 30” y tramo enterrado marrón zona de alta hacia tramo verde zona de inyección en 26 “, cuyo recorrido en la mayor parte del mismo, por un rack que servirá de apoyo para el soportado.

5.2. RECOPILACIÓN DE INFORMACIÓN

La información necesaria para el estudio se ha obtenido de los diagramas de tuberías e instrumentos (P&ID’s), isométricos, lista de líneas y planos constructivos de los equipos (ver apartados 8.1 a 8.3).

Para el análisis de posibles ubicaciones de los puntos de suportación se han consultado los planos estructurales del rack que sirve de apoyo para el recorrido de la línea así como el modelo 3D del que se extrajo la imagen de la figura 5.1.

Otra fuente de información han sido las especificaciones del proyecto que sientan las bases de las condiciones de diseño que son de aplicación. En este caso es fundamental en la consideración de la temperatura ambiente en 21º C y un factor para el cálculo del sismo de 0.35. Así también establece que el efecto del viento se tendrá en cuenta para diámetros de tubería, incluido aislamiento, mayores de 400 mm. Los coeficientes de rozamiento considerados por esta especificación son de 0.3 en contactos acero-acero y de 0.4 en contactos acero-hormigón. El desplazamiento vertical máximo se establece en 15 mm. Los tamaños y pesos de los elementos como bridas o válvulas se han obtenido de catálogos ya que se trata de elementos totalmente estandarizados.

5.2 CALCULOS MEDIANTE CAESAR II.

El estudio de la línea se ha realizado con el software CAESAR II. Este sofware es utilizado mayoritariamente en el sector para la realización de este tipo de cálculos Todas la información para la correcta interpretación de los resultados (sistemas de referencia, situación de los nodos del cálculo se encuentra representada en los planos isométricos de estrés del apartado 8.2)

Para la realización del estudio es necesario tener en cuenta varios casos de carga.
En primer lugar es necesario el análisis del comportamiento de la línea durante la prueba hidrostática que se debe realizar previa a la puesta en marcha de la planta. Esta prueba consiste en aplicar 1.5 veces la presión de operación en el circuito lleno de agua. Por tanto, en este caso intervendrán las cargas del peso propio de la tubería llena de agua (se codificará como WW) y la presión de prueba hidrostática (codificada como HP).
Para un mejor análisis será necesario tener casos de carga en los que actúen únicamente las cargas sostenidas, las cargas térmicas o las cargas ocasionales en combinación con las cargas sostenidas.
El resumen de las codificaciones aplicadas se presenta a continuación:

- WW Peso de la línea llena de agua.
- W Peso de la línea con el fluido de operación.
- D1, Vector desplazamiento en las conexiones de origen
(ver isométricos de flexibilidad en apartado 8.2)
- T1 Casos térmicos simulados (ver isométricos
de flexibilidad en apartado 8.2).
- P1 Casos de presión simulados (ver isométricos
de flexibilidad en apartado 8.2).
- L2, L3,L4 Limitación nudos de enganche a colector enterrado salida compresores.

Con la codificación anterior, estos son los casos de carga que se analizarán en CAESAR II.

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

INPUT LISTING	
Displacements : 1 (HYD) WW+HP	541
Displacements : 2 (OPE) W+D1+T1+P1	570
Displacements : 3 (SUS) W+P1	599
Displacements : 4 (EXP) L4=L2-L3	628 condiciones de borde
Restraints : 1 (HYD) WW+HP	657
Restraints : 2 (OPE) W+D1+T1+P1	682
Restraints : 3 (SUS) W+P1	707
Restraints : 4 (EXP) L4=L2-L3	732
Stresses : 1 (HYD) WW+HP	756
Stresses : 2 (OPE) W+D1+T1+P1	847
Stresses : 3 (SUS) W+P1	938
Stresses : 4 (EXP) L4=L2-L3	1029 condiciones de borde

Ver anexo 8.1 cálculo completo del sistema.

5.4. COMPROBACIÓN DE RESULTADOS.

5.4.1 Tensiones en los elementos

En las páginas 334 a 457 se muestran los informes de tensiones máximas en los elementos. En estos informes se puede observar que en todos los casos, los esfuerzos se encuentran por debajo de los admisibles con unos márgenes de seguridad elevados.

El esfuerzo más desfavorable se da en el caso de carga 1 (WW+HP) considerando peso propio más prueba hidráulica llegamos a valores del esfuerzo cercanos al 57 % en nudos 290, 299 y 300 como podemos observar en la página 333, como nos indica en la página 322 el nudo 290 con un valor del 56.2%

```
ODE STRESS CHECK PASSED      : LOADCASE 1 (HYD) WW+HP


Highest Stresses: (   KPa    )

CodeStress Ratio (%):       56.2%   @Node    290

Code Stress:           103208.4  Allowable:   183754.2

Axial Stress:          154807.9  @Node     75

Bending Stress:         58271.2  @Node     80

Torsion Stress:          1916.3  @Node   2555

Hoop Stress:           309602.8  @Node     75

3D Max Intensity:      315524.1  @Node     75
```

5.4.2 Desplazamientos

En las páginas 220 a 273 aparecen los desplazamientos máximos en cada nodo entre los desplazamientos sufridos en cada caso de carga. En ningún caso aparecen desplazamientos verticales mayores al límite establecido por la especificación del proyecto (15 mm), para el caso 2 de desplazamientos en condiciones de operación, condiciones de temperatura+ presiones de operación+ desplazamientos+ peso propio lo que nos da un resultado de -10mm en el nudo 692.

Los desplazamientos horizontales en ningún caso provocan riesgos de choques con otras líneas o elementos dado el trazado de la línea de estudio que permite asumir estos desplazamientos máximos en el sentido que se indica en los informes.

		Y (mm)				
692	-22.675	-10.679	7.913	0.2282	0.0848	-0.0438
700	-22.226	-9.253	11.237	0.2406	0.0918	-0.0977
704	-21.846	-8.915	12.142	0.2415	0.0928	-0.1021
705	-20.650	-7.929	14.795	0.2433	0.0958	-0.1133
707	-14.365	-3.510	26.622	0.2341	0.1090	-0.1329
709	-7.938	2.159	39.313	0.1496	0.1084	-0.0672
710	-8.780	3.153	41.267	0.1187	0.0968	-0.0254
719	-10.698	2.907	42.863	0.0735	0.0916	0.0077
720	-10.953	1.721	42.704	0.0313	0.0899	0.0193
730	-10.950	1.705	42.698	0.0311	0.0898	0.0194
740	-20.244	-7.614	15.648	0.2436	0.0967	-0.1163
745	-15.304	-4.142	24.971	0.2372	0.1071	-0.1331
750	-8.282	-4.195	-0.733	0.1457	0.0182	0.0480
754	-6.432	-3.279	-1.046	0.1370	0.0126	0.0412
755	-5.644	-2.931	-1.145	0.1342	0.0105	0.0383
760	3.527	-0.501	-1.333	0.1006	-0.0033	0.0124
769	5.378	-0.286	-1.256	0.0949	-0.0041	0.0089
770	6.165	-0.216	-1.218	0.0930	-0.0044	0.0074

780	15.342	0.009	-0.719	0.0718	-0.0047	0.0002
789	17.195	0.012	-0.625	0.0686	-0.0046	-0.0001
790	17.984	0.008	-0.584	0.0677	-0.0046	-0.0007
800	23.231	-0.104	-0.351	0.0624	-0.0030	-0.0025
810	31.127	-0.214	-0.297	0.0543	0.0021	0.0016
820	39.030	0.437	-0.723	0.0462	0.0073	0.0154
829	40.335	0.681	-0.833	0.0451	0.0078	0.0181
830	40.573	0.728	-0.854	0.0451	0.0078	0.0181
831	37.834	2.082	-0.735	-0.0299	0.0708	0.2322
832	33.305	3.531	-1.664	-0.0810	0.1337	0.3017
885	8.123	-0.000	-6.462	0.0184	-0.1334	-0.0139
890	7.500	-0.086	-6.039	0.0165	-0.1322	-0.0219
900	3.333	-0.601	-3.171	0.0161	-0.1314	-0.0226
910	2.939	-0.647	-2.889	0.0157	-0.1208	-0.0279
918	1.211	-0.906	-1.590	0.0138	-0.1139	-0.0054
919	0.808	-0.794	-1.243	0.0001	-0.1001	-0.0011
920	0.650	-0.445	-1.129	-0.0088	-0.0897	0.0039
930	0.112	0.014	-0.450	0.0019	-0.0407	-0.0007
940	0.000	0.000	0.000	0.0000	-0.0000	-0.0000
958	0.651	0.160	-5.815	-0.0245	-0.0711	-0.0002
959	0.531	0.234	-5.367	-0.0162	-0.0683	-0.0080
960	0.768	0.199	-4.972	-0.0088	-0.0697	-0.0224
965	1.434	-0.000	-4.449	-0.0013	-0.0765	-0.0338
970	0.655	0.158	-5.820	-0.0245	-0.0711	-0.0002
980	2.902	-0.617	-8.689	-0.0247	-0.0710	0.0004
1008	3.314	-1.137	-8.120	-0.1795	-0.0574	0.0306

1009	3.154	-0.868	-8.640	-0.1023	-0.0589	0.0078
1010	2.906	-0.618	-8.690	-0.0249	-0.0710	0.0005
1044	-4.429	-0.654	-1.509	-0.0967	-0.0027	0.0037
1045	-4.525	-0.398	-2.890	-0.0927	-0.0051	0.0107
1048	-4.684	-0.184	-3.965	-0.0805	-0.0072	0.0115
1049	-4.714	-0.034	-4.170	-0.0403	-0.0032	-0.0027
1050	-4.700	0.071	-4.145	-0.0077	0.0068	-0.0121

5.4.3 Cargas en las restricciones

Al analizar las cargas resultantes de los cálculos en las páginas 286 a 334 se realizan varias comprobaciones.

En primer lugar se comprueba que en los puntos de apoyo la tubería no se levanta. En este caso, todos los puntos de apoyo existe una reacción vertical no nula, de forma que no existe dicho levantamiento. La otra comprobación consiste en analizar si todas las cargas sobre las conexiones a las boquillas de los equipos están por debajo de las admisibles. Estas cargas deben estar por debajo en los casos de carga de prueba hidráulica y de operación como así se demuestra en la tabla siguiente para el caso 1 condiciones de prueba hidráulica. En los casos de diseño y ocasionales puede sobrepasarse ese límite siempre que no sea en un factor excesivo que se puede considerar del doble de las admisibles. También debemos comprobar que en condiciones de borde cuando tenemos conexiones a equipos las fuerzas en estos nodos deben de estar por debajo de las fuerzas admisibles marcadas por los fabricantes. En este estudio no lo tenemos en consideración al configurar la línea aislada.

RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

c	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
293	0	0	15	0	0	0	Bi-linear Z2
293	0	-2	0	0	0	0	Bi-linear Y2
300	0	0	2	0	0	0	Bi-linear

							Z2
300	0	-18	0	0	0	0	Bi-linear Y2
300	0	0	0	0	0	0	Bi-linear X2
346	0	-18	0	0	0	0	Bi-linear Y2
346	-153	0	0	0	0	0	Bi-linear X2
346	0	0	122	0	0	0	Bi-linear Z2
350	0	-19	0	0	0	0	Bi-linear Y2
350	137	0	0	0	0	0	Bi-linear X2
350	0	0	286	0	0	0	Bi-linear Z2
350	17	0	0	0	0	0	Bi-linear X2
350	0	0	1003	0	0	0	Bi-linear Z2
350	0	-1891	0	0	0	0	Bi-linear Y2
380	1	0	0	0	0	0	Bi-linear X2
380	0	0	9	0	0	0	Bi-linear Z2
380	0	-210	0	0	0	0	Bi-linear Y2
383	0	-27	0	0	0	0	Bi-linear Y2
383	279	0	0	0	0	0	Bi-linear X2

383	0	0	27	0	0	0	Bi-linear Z2
410	7	0	0	0	0	0	Bi-linear X2
410	0	0	147	0	0	0	Bi-linear Z2
410	0	-3058	0	0	0	0	Bi-linear Y2
420	0	-30	0	0	0	0	Bi-linear Y2
420	131	0	0	0	0	0	Bi-linear X2
420	0	0	41	0	0	0	Bi-linear Z2
420	22	0	0	0	0	0	Bi-linear X2
420	0	0	196	0	0	0	Bi-linear Z2
420	0	-6674	0	0	0	0	Bi-linear Y2
430	15	0	0	0	0	0	Bi-linear X2
430	0	0	8	0	0	0	Bi-linear Z2
430	0	-2020	0	0	0	0	Bi-linear Y2
430	7	0	0	0	0	0	Bi-linear X2
430	0	0	4	0	0	0	Bi-linear Z2
430	0	-985	0	0	0	0	Bi-linear Y2
440	0	-17	0	0	0	0	Bi-linear

							Y2
440	134	0	0	0	0	0	Bi-linear X2
440	0	0	7	0	0	0	Bi-linear Z2
440	22	0	0	0	0	0	Bi-linear X2
440	0	0	34	0	0	0	Bi-linear Z2
440	0	-3679	0	0	0	0	Bi-linear Y2
450	15	0	0	0	0	0	Bi-linear X2
450	0	0	27	0	0	0	Bi-linear Z2
450	0	-1952	0	0	0	0	Bi-linear Y2
450	7	0	0	0	0	0	Bi-linear X2
450	0	0	13	0	0	0	Bi-linear Z2
450	0	-951	0	0	0	0	Bi-linear Y2
460	23	0	0	0	0	0	Bi-linear X2
460	0	0	-11	0	0	0	Bi-linear Z2
460	0	-4516	0	0	0	0	Bi-linear Y2
470	1	0	0	0	0	0	Bi-linear X2
470	0	0	13	0	0	0	Bi-linear Z2

470	0	-284	0	0	0	0	Bi-linear Y2
490	0	-36	0	0	0	0	Bi-linear Y2
490	11	0	0	0	0	0	Bi-linear X2
490	0	0	-150	0	0	0	Bi-linear Z2
565	0	-21215	0	0	0	0	Rigid +Y
600	477	2034	486	1660	-1658	767	Displ. Reaction
635	0	-15255	0	0	0	0	Rigid +Y
680	0	0	-220	0	0	0	Bi-linear Z2
680	0	-12817	0	0	0	0	Bi-linear Y2
680	-13	0	0	0	0	0	Bi-linear X2
680	0	0	-38	0	0	0	Bi-linear Z2
680	0	-2200	0	0	0	0	Bi-linear Y2
680	-74	0	0	0	0	0	Bi-linear X2
690	0	0	-95	0	0	0	Bi-linear Z2
690	0	-3887	0	0	0	0	Bi-linear Y2
690	-22	0	0	0	0	0	Bi-linear X2
691	0	0	-127	0	0	0	Bi-linear Z2

691	0	-4185	0	0	0	0	Bi-linear Y2
691	-23	0	0	0	0	0	Bi-linear X2
692	0	0	-112	0	0	0	Bi-linear Z2
692	-1878	-1878	0	0	0	0	Bi-linear X2
692	210	-210	0	0	0	0	Bi-linear X2
700	15	0	0	0	0	0	Bi-linear X2
700	0	0	-82	0	0	0	Bi-linear Z2
700	0	-448	0	0	0	0	Bi-linear Y2
705	168	0	0	0	0	0	Bi-linear X2
705	0	0	-14	0	0	0	Bi-linear Z2
705	0	-233	0	0	0	0	Bi-linear Y2
750	0	0	-89	0	0	0	Bi-linear Z2
750	0	-10699	0	0	0	0	Bi-linear Y2
750	-82	0	0	0	0	0	Bi-linear X2
755	0	0	-13	0	0	0	Bi-linear Z2
755	0	-1507	0	0	0	0	Bi-linear Y2
755	-74	0	0	0	0	0	Bi-linear

							X2
755	0	0	-74	0	0	0	Bi-linear Z2
755	0	-8780	0	0	0	0	Bi-linear Y2
755	-13	0	0	0	0	0	Bi-linear X2
760	0	0	-91	0	0	0	Bi-linear Z2
760	0	-8029	0	0	0	0	Bi-linear Y2
760	-82	0	0	0	0	0	Bi-linear X2
770	0	0	-15	0	0	0	Bi-linear Z2
770	0	-1201	0	0	0	0	Bi-linear Y2
770	-73	0	0	0	0	0	Bi-linear X2
770	0	0	-85	0	0	0	Bi-linear Z2
770	0	-6996	0	0	0	0	Bi-linear Y2
770	-13	0	0	0	0	0	Bi-linear X2
780	0	0	-90	0	0	0	Bi-linear Z2
780	0	-7598	0	0	0	0	Bi-linear Y2
780	-82	0	0	0	0	0	Bi-linear X2
790	0	0	-13	0	0	0	Bi-linear Z2

790	0	-1170	0	0	0	0	Bi-linear Y2
790	-42	0	0	0	0	0	Bi-linear X2
790	0	0	-42	0	0	0	Bi-linear Z2
790	0	-3890	0	0	0	0	Bi-linear Y2
790	-13	0	0	0	0	0	Bi-linear X2
800	0	0	-88	0	0	0	Bi-linear Z2
800	0	-10020	0	0	0	0	Bi-linear Y2
800	-104	0	0	0	0	0	Bi-linear X2
810	0	0	-147	0	0	0	Bi-linear Z2
810	0	-12831	0	0	0	0	Bi-linear Y2
810	-125	0	0	0	0	0	Bi-linear X2
820	0	0	-169	0	0	0	Bi-linear Z2
820	0	-7668	0	0	0	0	Bi-linear Y2
820	-71	0	0	0	0	0	Bi-linear X2
830	0	0	-10	0	0	0	Bi-linear Z2
830	0	-408	0	0	0	0	Bi-linear Y2
830	-4	0	0	0	0	0	Bi-linear

							X2
832	-141	0	0	0	0	0	Bi-linear X2
832	0	0	7	0	0	0	Bi-linear Z2
832	0	-75	0	0	0	0	Bi-linear Y2
885	0	-12133	0	0	0	0	Rigid +Y
940	25	-1449	106	-756	-76	-236	Displ. Reaction
965	0	-16351	0	0	0	0	Rigid +Y
1045	0	-17	0	0	0	0	Bi-linear Y2
1045	-5	0	0	0	0	0	Bi-linear X2
1045	0	0	66	0	0	0	Bi-linear Z2
1105	0	-15907	0	0	0	0	Rigid +Y
1225	0	-11980	0	0	0	0	Rigid +Y
1270	-99	-1665	219	-919	257	-255	Displ. Reaction
1295	0	-30	0	0	0	0	Bi-linear Y2
1295	267	0	0	0	0	0	Bi-linear X2
1295	0	0	32	0	0	0	Bi-linear Z2
1355	0	-16575	0	0	0	0	Rigid +Y
1425	0	-12099	0	0	0	0	Rigid +Y
1470	-40	-1388	14	-696	-29	-252	Displ. Reaction

1550	-9	-3726	-201	-5333	70	54	Displ. Reaction
1650	9	-3638	-339	-5086	-73	-47	Displ. Reaction
1750	1	-3755	-63	-5412	-9	0	Displ. Reaction
1850	1	-3784	-128	-5314	-4	5	Displ. Reaction
1925	0	-11871	0	0	0	0	Rigid +Y
1980	-84	-1781	95	-977	171	-281	Displ. Reaction
1990	0	0	63	0	0	0	Bi-linear Z2
1990	0	-17	0	0	0	0	Bi-linear Y2
1990	4	0	0	0	0	0	Bi-linear X2
2060	0	-15761	0	0	0	0	Rigid +Y
2150	-1	-3730	-82	-5343	6	10	Displ. Reaction
2205	0	-2648	0	0	0	0	Rigid +Y
2220	0	-3421	0	0	0	0	Rigid +Y
2240	0	0	0	0	0	0	Rigid Z w/gap
2240	0	-3188	0	0	0	0	Rigid +Y
2300	0	-2046	0	0	0	0	Rigid +Y
2310	0	0	0	0	0	0	Rigid Z w/gap
2310	0	-3096	0	0	0	0	Rigid +Y
2560	20	-3646	52	1132	57	-1577	Displ. Reaction

3120	36	748	-1	1112	54	2419	Displ. Reaction
3320	-7	-5266	20	1121	29	-1859	Displ. Reaction
4005	0	-133919	0	0	0	0	Rigid +Y
4010	0	-36415	0	0	0	0	Rigid +Y
4020	0	-59905	0	0	0	0	Rigid +Y
4030	0	0	0	0	0	0	Rigid X w/gap
4030	0	-44445	0	0	0	0	Rigid +Y
4040	0	-68633	0	0	0	0	Rigid +Y
4050	0	-74793	0	0	0	0	Rigid +Y
4050	157	0	0	0	0	0	Rigid X w/gap
4050	0	0	0	0	0	0	Rigid Z w/gap
4120	0	-60130	0	0	0	0	Rigid +Y
4120	1985	0	0	0	0	0	Rigid X w/gap
4130	0	-85476	0	0	0	0	Rigid +Y
4230	-352	0	0	0	0	0	Bi-linear X2
4230	0	0	65	0	0	0	Bi-linear Z2
4230	0	-88	0	0	0	0	Bi-linear Y2
4300	0	-67	0	0	0	0	Bi-linear Y2
4300	-219	0	0	0	0	0	Bi-linear X2
4300	0	0	48	0	0	0	Bi-linear

							Z2
4400	0	0	21	0	0	0	Bi-linear Z2
4400	0	-65	0	0	0	0	Bi-linear Y2
4400	-156	0	0	0	0	0	Bi-linear X2
5560	0	-12373	0	0	0	0	Rigid +Y
5605	0	-4232	0	0	0	0	Rigid +Y
5620	113	-8172	199	-246	-315	1176	Displ. Reaction
6100	0	-17629	0	0	0	0	Rigid +Y
6110	0	0	0	0	0	0	Rigid Z w/gap
6110	0	-5797	0	0	0	0	Rigid +Y
6120	0	-1774	0	0	0	0	Rigid +Y
6130	0	0	0	0	0	0	Rigid Z w/gap
6130	0	-2665	0	0	0	0	Rigid +Y
7000	0	-35005	0	0	0	0	Rigid +Y
7010	0	-88489	0	0	0	0	Rigid +Y
7040	0	-99249	0	0	0	0	Rigid +Y
7060	0	-51084	0	0	0	0	Rigid +Y
7080	0	-81952	0	0	0	0	Rigid +Y
7100	0	-28750	0	0	0	0	Rigid +Y
7100	0	0	0	0	0	0	Rigid Z w/gap
7210	0	-68147	0	0	0	0	Rigid +Y
7220	0	-31098	0	0	0	0	Rigid +Y

7230	0	-83297	0	0	0	0	Rigid +Y
7280	0	-78798	0	0	0	0	Rigid +Y
7300	0	-26572	0	0	0	0	Rigid +Y
7320	0	-29926	0	0	0	0	Rigid +Y
7330	0	0	0	0	0	0	Rigid X w/gap
7330	0	-29017	0	0	0	0	Rigid +Y
7330	0	0	0	0	0	0	Rigid Z w/gap
7340	0	-29494	0	0	0	0	Rigid +Y
7350	0	-28390	0	0	0	0	Rigid +Y
7350	27	0	0	0	0	0	Rigid X w/gap
7370	0	-32566	0	0	0	0	Rigid +Y
7380	0	-16074	0	0	0	0	Rigid +Y
7400	0	-50847	0	0	0	0	Rigid +Y
7400	16	0	0	0	0	0	Rigid X w/gap
7415	0	-49440	0	0	0	0	Rigid +Y
7445	0	-49263	0	0	0	0	Rigid +Y
7460	0	-50288	0	0	0	0	Rigid +Y
7460	0	0	0	0	0	0	Rigid X w/gap
7480	0	-20354	0	0	0	0	Rigid +Y
7480	0	0	0	0	0	0	Rigid Z w/gap
7490	0	-15420	0	0	0	0	Rigid +Y
7490	0	0	0	0	0	0	Rigid X w/gap

7615	0	-109184	0	0	0	0	Rigid +Y
7660	0	-11364	0	0	0	0	Rigid +Y
7670	0	-34236	0	0	0	0	Rigid +Y
7690	0	-31477	0	0	0	0	Rigid +Y
7720	0	-30958	0	0	0	0	Rigid +Y
7740	0	-35248	0	0	0	0	Rigid +Y
7750	0	0	0	0	0	0	Rigid X w/gap
7750	0	-9127	0	0	0	0	Rigid +Y
7760	0	-21412	0	0	0	0	Rigid +Y
7790	0	-18244	0	0	0	0	Rigid +Y
7800	0	-19058	0	0	0	0	Rigid +Y
7810	0	0	0	0	0	0	Rigid X w/gap
7810	0	-18861	0	0	0	0	Rigid +Y
7810	0	0	0	0	0	0	Rigid Z w/gap
7820	0	-18862	0	0	0	0	Rigid +Y
7830	-2	0	0	0	0	0	Rigid X w/gap
7830	0	-19052	0	0	0	0	Rigid +Y
7840	0	-18265	0	0	0	0	Rigid +Y
7870	0	0	0	0	0	0	Rigid X w/gap
7870	0	-21330	0	0	0	0	Rigid +Y
7880	0	-8642	0	0	0	0	Rigid +Y
8020	0	-8282	0	0	0	0	Rigid +Y
8020	0	0	0	0	0	0	Rigid X w/gap

8120	0	-11318	0	0	0	0	Rigid +Y
8120	0	0	0	0	0	0	Rigid X w/gap
8220	0	0	0	0	0	0	Rigid X w/gap
8220	0	-8153	0	0	0	0	Rigid +Y
8320	0	-8777	0	0	0	0	Rigid +Y
8320	0	0	0	0	0	0	Rigid X w/gap
8420	0	0	0	0	0	0	Rigid X w/gap
8420	0	-8318	0	0	0	0	Rigid +Y
9100	0	298	0	0	0	0	Bi-linear Y2
9100	0	0	31	0	0	0	Bi-linear Z2
9100	8	0	0	0	0	0	Bi-linear X2
9101	0	-1616	0	0	0	0	Bi-linear Y2
9101	0	0	62	0	0	0	Bi-linear Z2
9101	87	0	0	0	0	0	Bi-linear X2
9110	0	0	-321	0	0	0	Bi-linear Z2
9110	0	-78	0	0	0	0	Bi-linear Y2
9110	-205	0	0	0	0	0	Bi-linear X2
9120	0	0	-674	0	0	0	Bi-linear Z2

9120	0	-52	0	0	0	0	Bi-linear Y2
9120	-783	0	0	0	0	0	Bi-linear X2
9150	0	-105161	0	0	0	0	Rigid +Y
9250	0	-53764	0	0	0	0	Rigid +Y
9300	0	-28015	0	0	0	0	Rigid +Y
9335	0	-98723	0	0	0	0	Rigid +Y
9370	0	0	0	0	0	0	Rigid X w/gap
9370	0	-43774	0	0	0	0	Rigid +Y
9622	0	-72260	0	0	0	0	Rigid +Y
9660	0	-29588	0	0	0	0	Rigid +Y
9690	0	-62833	0	0	0	0	Rigid +Y
9900	0	-59791	0	0	0	0	Rigid +Y
9960	0	0	-507	0	0	0	Bi-linear Z2
9960	0	-4	0	0	0	0	Bi-linear Y2
9960	203	0	0	0	0	0	Bi-linear X2
9961	0	0	-835	0	0	0	Bi-linear Z2
9961	0	-7	0	0	0	0	Bi-linear Y2
9961	135	0	0	0	0	0	Bi-linear X2
9962	0	-391	-391	0	0	0	Bi-linear X2
9962	0	16	-16	0	0	0	Bi-linear X2

9962	-48	0	0	0	0	0	Bi-linear X2
10010	0	-94	0	0	0	0	Bi-linear Y2
10010	0	0	-108	0	0	0	Bi-linear Z2
10010	-318	0	0	0	0	0	Bi-linear X2
10011	0	-1086	0	0	0	0	Bi-linear Y2
10011	0	0	-155	0	0	0	Bi-linear Z2
10011	-107	0	0	0	0	0	Bi-linear X2
10012	0	-4257	0	0	0	0	Bi-linear Y2
10012	0	0	-128	0	0	0	Bi-linear Z2
10012	3	0	0	0	0	0	Bi-linear X2
10020	0	-1085	0	0	0	0	Bi-linear Y2
10020	0	0	-13	0	0	0	Bi-linear Z2
10020	1	0	0	0	0	0	Bi-linear X2
10030	0	-723	0	0	0	0	Bi-linear Y2
10030	0	0	-10	0	0	0	Bi-linear Z2
10030	0	0	0	0	0	0	Bi-linear X2
10100	-40	0	0	0	0	0	Bi-linear

							X2
10100	0	0	30	0	0	0	Bi-linear Z2
10100	0	-252	0	0	0	0	Bi-linear Y2
10110	-1108	0	0	0	0	0	Bi-linear X2
10110	0	-4314	0	0	0	0	Bi-linear Y2
10110	0	0	-42	0	0	0	Bi-linear Z2
10111	-484	0	0	0	0	0	Bi-linear X2
10111	0	-2972	0	0	0	0	Bi-linear Y2
10111	0	0	-63	0	0	0	Bi-linear Z2
10112	-40	0	0	0	0	0	Bi-linear X2
10112	0	-4348	0	0	0	0	Bi-linear Y2
10112	0	0	-55	0	0	0	Bi-linear Z2
10120	1412	0	0	0	0	0	Bi-linear X2
10120	0	0	-1135	0	0	0	Bi-linear Z2
10120	0	-113	0	0	0	0	Bi-linear Y2
10121	176	0	0	0	0	0	Bi-linear X2
10121	0	0	-848	0	0	0	Bi-linear Z2

10121	0	-161	0	0	0	0	Bi-linear Y2
10122	-254	0	0	0	0	0	Bi-linear X2
10122	0	-928	-928	0	0	0	Bi-linear X2
10122	0	-37	37	0	0	0	Bi-linear X2
10135	0	-87403	0	0	0	0	Rigid +Y
10140	0	-35518	0	0	0	0	Rigid +Y
10160	0	-53251	0	0	0	0	Rigid +Y
10180	0	-56611	0	0	0	0	Rigid +Y
10200	0	0	0	0	0	0	Rigid Z w/gap
10200	0	-22186	0	0	0	0	Rigid +Y
11000	0	0	106	0	0	0	Bi-linear Z2
11000	55	0	0	0	0	0	Bi-linear X2
11000	0	-23199	0	0	0	0	Bi-linear Y2
11010	0	0	145	0	0	0	Bi-linear Z2
11010	-2	0	0	0	0	0	Bi-linear X2
11010	0	-52667	0	0	0	0	Bi-linear Y2
11020	0	0	149	0	0	0	Bi-linear Z2
11020	1	0	0	0	0	0	Bi-linear X2
11020	0	-49833	0	0	0	0	Bi-linear

							Y2
11030	0	0	154	0	0	0	Bi-linear Z2
11030	-235	0	0	0	0	0	Bi-linear X2
11030	0	-54510	0	0	0	0	Bi-linear Y2
11040	0	0	89	0	0	0	Bi-linear Z2
11040	896	0	0	0	0	0	Bi-linear X2
11040	0	-18194	0	0	0	0	Bi-linear Y2
11041	0	0	15	0	0	0	Bi-linear Z2
11041	231	0	0	0	0	0	Bi-linear X2
11041	0	-1957	0	0	0	0	Bi-linear Y2
11042	0	-28	-28	0	0	0	Bi-linear X2
11042	123	0	0	0	0	0	Bi-linear X2
11042	0	-594	594	0	0	0	Bi-linear X2
11100	0	-25958	0	0	0	0	Bi-linear Y2
11100	0	0	-305	0	0	0	Bi-linear Z2
11100	86	0	0	0	0	0	Bi-linear X2
11110	0	-21837	0	0	0	0	Bi-linear Y2

11110	0	0	-244	0	0	0	Bi-linear Z2
11110	13	0	0	0	0	0	Bi-linear X2
11200	239	0	0	0	0	0	Bi-linear X2
11200	0	-24585	0	0	0	0	Bi-linear Y2
11200	0	0	-128	0	0	0	Bi-linear Z2
11210	31	0	0	0	0	0	Bi-linear X2
11210	0	-25020	0	0	0	0	Bi-linear Y2
11210	0	0	-139	0	0	0	Bi-linear Z2
11211	-62	0	0	0	0	0	Bi-linear X2
11211	0	-4009	0	0	0	0	Bi-linear Y2
11211	0	0	-72	0	0	0	Bi-linear Z2
11212	-74	0	0	0	0	0	Bi-linear X2
11212	0	-4679	0	0	0	0	Bi-linear Y2
11212	0	0	-75	0	0	0	Bi-linear Z2
11213	73	0	0	0	0	0	Bi-linear X2
11213	0	-8120	0	0	0	0	Bi-linear Y2
11213	0	0	-46	0	0	0	Bi-linear

							Z2
11214	24	0	0	0	0	0	Bi-linear X2
11214	0	-1348	1348	0	0	0	Bi-linear X2
11214	0	-87	-87	0	0	0	Bi-linear X2
12000	0	0	-31	0	0	0	Bi-linear Z2
12000	0	-1323	0	0	0	0	Bi-linear Y2
12000	0	-75	0	0	0	0	Bi-linear Y2
12000	-152	0	0	0	0	0	Bi-linear X2
12000	0	0	-47	0	0	0	Bi-linear Z2
12000	-12	0	0	0	0	0	Bi-linear X2
12025	0	-4630	0	0	0	0	Rigid +Y
13000	0	-65	0	0	0	0	Bi-linear Y2
13000	-152	0	0	0	0	0	Bi-linear X2
13000	0	0	-20	0	0	0	Bi-linear Z2
13000	-21	0	0	0	0	0	Bi-linear X2
13000	0	0	-22	0	0	0	Bi-linear Z2
13000	0	-1956	0	0	0	0	Bi-linear Y2

13025	0	-4604	0	0	0	0	Rigid +Y
14000	-21	0	0	0	0	0	Bi-linear X2
14000	0	0	-81	0	0	0	Bi-linear Z2
14000	0	-3802	0	0	0	0	Bi-linear Y2
15000	0	0	70	0	0	0	Bi-linear Z2
15000	17	0	0	0	0	0	Bi-linear X2
15000	0	0	270	0	0	0	Bi-linear Z2
15000	0	-4798	0	0	0	0	Bi-linear Y2
15000	0	-27	0	0	0	0	Bi-linear Y2
15000	128	0	0	0	0	0	Bi-linear X2
16000	0	0	67	0	0	0	Bi-linear Z2
16000	8	0	0	0	0	0	Bi-linear X2
16000	0	0	117	0	0	0	Bi-linear Z2
16000	0	-2905	0	0	0	0	Bi-linear Y2
16000	0	-36	0	0	0	0	Bi-linear Y2
16000	141	0	0	0	0	0	Bi-linear X2
17000	0	-88	0	0	0	0	Bi-linear Y2

17000	-154	0	0	0	0	0	Bi-linear X2
17000	0	0	-19	0	0	0	Bi-linear Z2
17000	-21	0	0	0	0	0	Bi-linear X2
17000	0	0	-22	0	0	0	Bi-linear Z2
17000	0	-2656	0	0	0	0	Bi-linear Y2
17025	0	-4672	0	0	0	0	Rigid +Y
18000	137	0	0	0	0	0	Bi-linear X2
18000	0	0	5	0	0	0	Bi-linear Z2
18000	0	-16	0	0	0	0	Bi-linear Y2
18000	23	0	0	0	0	0	Bi-linear X2
18000	0	0	24	0	0	0	Bi-linear Z2
18000	0	-3660	0	0	0	0	Bi-linear Y2
19000	0	-2041	0	0	0	0	Bi-linear Y2
19000	0	-67	0	0	0	0	Bi-linear Y2
19000	-153	0	0	0	0	0	Bi-linear X2
19000	0	0	-21	0	0	0	Bi-linear Z2
19000	-21	0	0	0	0	0	Bi-linear X2

6. CONCLUSIONES

A nivel técnico, el estudio realizado arroja unos resultados que cumplen con la normativa vigente, tanto externa (normas internacionales) como interna (especificaciones del proyecto concreto).

Tanto los esfuerzos como los desplazamientos y cargas en las restricciones están dentro de los límites admisibles. Esto permite garantizar la integridad del sistema durante la operación de la planta de forma que ésta sea segura para el personal que en ella trabaje.

A nivel personal, el presente proyecto a supuesto un reto por la necesidad de profundizar en un campo tan especializado de la ingeniería.

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8. ANEXOS CÁLCULOS Y PLANOS

8.1 CÁLCULOS

Table of Contents

LISTING OF STATIC LOAD CASES FOR THIS ANALYSIS

1 (HYD) WW+HP

2 (OPE) W+D1+T1+P1

3 (SUS) W+P1

4 (EXP) L4=L2-L3

INPUT LISTING

PIPE DATA

From 10210 To 10200 DX= 250.000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.5 mm. Insul= .000 mm. Cor= .0000 mm.

GENERAL

T1= 44 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 203,308,080 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 10200 +Y

Node 10200 Z Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 10200 To 10190 DX= 1,750.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

From 10190 To 10180 DX= 5,250.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 10180 +Y

From 10180 To 10170 DX= 1,750.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

INPUT LISTING

From 10170 To 10160 DX= 5,250.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 10160 +Y

From 10160 To 10150 DX= 1,750.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 10150 To 10140 DX= 5,250.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 10140 +Y

From 10140 To 10135 DX= 7,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 10135 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 10135 To 10130 DX= 2,750.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

```
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
SIF's & TEE's
   Node 10130   Welding Tee
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From 10130  To 10300  DX= 559.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From 10130  To 10260 DY= -3,481.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
```

```
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From 10260  To 10250 DY= -1,300.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
-------------------------------------------------------------------------------
From 10250  To 10120 DY= -100.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
-------------------------------------------------------------------------------
From 10120  To 10121  DX= .000 mm.  DY= -2,107.000 mm.  DZ= .000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
```

INPUT LISTING

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 10120 Y2 K= 959 N./cm. Yield K= 1 N./cm. Yield Force= 3,254 N.

Node 10120 X2 K= 16,230 N./cm. Yield K= 1 N./cm.

Yield Force= 55,067 N.

Node 10120 Z2 K= 16,230 N./cm. Yield K= 1 N./cm.

Yield Force= 55,067 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 10121 To 10122 DX= .000 mm. DY= -473.446 mm. DZ= .000 mm.

BEND at "TO" end

Radius= 1,143.000 mm. (LONG) Bend Angle= 45.000

RESTRAINTS

Node 10121 Y2 K= 1,368 N./cm. Yield K= 1 N./cm. Yield Force= 4,641 N.

Node 10121 X2 K= 23,144 N./cm. Yield K= 1 N./cm.

Yield Force= 78,529 N.

Node 10121 Z2 K= 23,144 N./cm. Yield K= 1 N./cm.

Yield Force= 78,529 N.

From 10122 To 10110 DX= .000 mm. DY= -669.554 mm. DZ= 669.554 mm.

INPUT LISTING

```
 BEND at "TO" end
    Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000
 RESTRAINTS
    Node 10122  X2   K= 817 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,773 N.
    Dir Vec= .0000  -.7071  .7071
    Node 10122  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.
    Node 10122  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.   Dir Vec= .0000  .7071  .7071
 ---------------------------------------------------------------------------
 From 10110  To 10111  DX= .000 mm.  DY= .000 mm.  DZ= 5,359.502 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node 10110  Z2   K= 2,633 N./cm.   Yield K= 1 N./cm.   Yield Force= 8,933 N.
    Node 10110  X2   K= 44,551 N./cm.   Yield K= 1 N./cm.
    Yield Force= 151,160 N.
    Node 10110  Y2   K= 44,551 N./cm.   Yield K= 1 N./cm.
    Yield Force= 151,160 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
```

INPUT LISTING

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 10111 To 10112 DX= .000 mm. DY= .000 mm. DZ= 3,685.472 mm.

RESTRAINTS

Node 10111 Z2 K= 3,902 N./cm. Yield K= 1 N./cm.

Yield Force= 13,238 N.

Node 10111 X2 K= 66,024 N./cm. Yield K= 1 N./cm.

Yield Force= 224,019 N.

Node 10111 Y2 K= 66,024 N./cm. Yield K= 1 N./cm.

Yield Force= 224,019 N.

From 10112 To 11200 DX= .000 mm. DY= .000 mm. DZ= 3,685.472 mm.

RESTRAINTS

Node 10112 Z2 K= 3,355 N./cm. Yield K= 1 N./cm.

Yield Force= 11,384 N.

Node 10112 X2 K= 56,776 N./cm. Yield K= 1 N./cm.

Yield Force= 192,641 N.

Node 10112 Y2 K= 56,776 N./cm. Yield K= 1 N./cm.

Yield Force= 192,641 N.

From 11200 To 11210 DX= .000 mm. DY= .000 mm. DZ= 13,400.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11200 Z2 K= 7,777 N./cm. Yield K= 1 N./cm.

Yield Force= 26,387 N.

Node 11200 X2 K= 131,604 N./cm. Yield K= 1 N./cm.

Yield Force= 446,533 N.

Node 11200 Y2 K= 131,604 N./cm. Yield K= 1 N./cm.

Yield Force= 446,533 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 11210 To 11211 DX= .000 mm. DY= .000 mm. DZ= 4,584.472 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11210 Z2 K= 8,186 N./cm. Yield K= 1 N./cm.

Yield Force= 27,776 N.

```
    Node 11210  X2   K= 138,529 N./cm.   Yield K= 1 N./cm.

    Yield Force= 470,028 N.

    Node 11210  Y2   K= 138,529 N./cm.   Yield K= 1 N./cm.

    Yield Force= 470,028 N.

 ---------------------------------------------------------------------------

 From 11211  To 11212  DX= .000 mm.  DY= .000 mm.  DZ= 4,584.472 mm.

 RESTRAINTS

    Node 11211  Z2   K= 4,174 N./cm.   Yield K= 1 N./cm.

    Yield Force= 14,161 N.

    Node 11211  X2   K= 70,626 N./cm.   Yield K= 1 N./cm.

    Yield Force= 239,633 N.

    Node 11211  Y2   K= 70,626 N./cm.   Yield K= 1 N./cm.

    Yield Force= 239,633 N.

 ---------------------------------------------------------------------------

 From 11212  To 11213  DX= .000 mm.  DY= .000 mm.  DZ= 4,886.056 mm.

 RESTRAINTS

    Node 11212  Z2   K= 4,311 N./cm.   Yield K= 1 N./cm.

    Yield Force= 14,627 N.

    Node 11212  X2   K= 72,949 N./cm.   Yield K= 1 N./cm.

    Yield Force= 247,515 N.

    Node 11212  Y2   K= 72,949 N./cm.   Yield K= 1 N./cm.

    Yield Force= 247,515 N.

 ---------------------------------------------------------------------------

 From 11213  To 11214  DX= .000 mm.  DY= .000 mm.  DZ= 473.446 mm.

 BEND at "TO" end

    Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000
```

INPUT LISTING

```
 RESTRAINTS
    Node 11213  Z2   K= 2,633 N./cm.   Yield K= 1 N./cm.   Yield Force= 8,933 N.
    Node 11213  X2   K= 44,551 N./cm.   Yield K= 1 N./cm.
    Yield Force= 151,160 N.
    Node 11213  Y2   K= 44,551 N./cm.   Yield K= 1 N./cm.
    Yield Force= 151,160 N.
 ------------------------------------------------------------------------
 From 11214  To 10100  DX= .000 mm.  DY= 669.554 mm.  DZ= 669.554 mm.
 BEND at "TO" end
    Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000
 RESTRAINTS
    Node 11214  X2   K= 817 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,773 N.
    Dir Vec= .0000  .7071  .7071
    Node 11214  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.
    Node 11214  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.   Dir Vec= .0000  .7071  -.7071
 ------------------------------------------------------------------------
 From 10100  To  9  DX= .000 mm.  DY= 1,105.223 mm.  DZ= .000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
```

INPUT LISTING

```
 RESTRAINTS
    Node 10100  Y2   K= 1,199 N./cm.   Yield K= 1 N./cm.   Yield Force= 4,069 N.
    Node 10100  X2   K= 20,294 N./cm.   Yield K= 1 N./cm.
    Yield Force= 68,859 N.
    Node 10100  Z2   K= 20,294 N./cm.   Yield K= 1 N./cm.
    Yield Force= 68,859 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  9  To  10  DX= .000 mm.  DY= 1,105.223 mm.  DZ= .000 mm.
 RESTRAINTS
    Node  10  Y2   K= 791 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,683 N.
    Node  10  X2   K= 13,380 N./cm.   Yield K= 1 N./cm.   Yield Force= 45,397 N.
    Node  10  Z2   K= 13,380 N./cm.   Yield K= 1 N./cm.   Yield Force= 45,397 N.
 ---------------------------------------------------------------------------
 From  10  To  20 DY= 1,156.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 1,143.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 19
```

```
    Angle/Node @2= .00 18
 ---------------------------------------------------------------------------
 From  20  To  30 DZ= 1,702.000 mm.
 GENERAL
    T1= 49 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  30   Welding Tee
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  30  To  120  DX= 1,600.000 mm.
 PIPE
    Dia= 508.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.
 GENERAL
    T1= 44 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
```

INPUT LISTING

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 119

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 120 To 125 DY= -786.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 125 To 149 DX= .000 mm. DY= -877.000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

INPUT LISTING

```
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  125  Y2   K= 535 N./cm.   Yield K= 1 N./cm.   Yield Force= 1,613 N.
    Node  125  X2   K= 11,993 N./cm.   Yield K= 1 N./cm.
    Yield Force= 36,124 N.
    Node  125  Z2   K= 11,993 N./cm.   Yield K= 1 N./cm.
    Yield Force= 36,124 N.
 ------------------------------------------------------------------------
 From  149  To  150  DX= .000 mm.  DY= -877.000 mm.  DZ= .000 mm.
 RESTRAINTS
    Node  150  Y2   K= 535 N./cm.   Yield K= 1 N./cm.   Yield Force= 1,613 N.
    Node  150  X2   K= 11,993 N./cm.   Yield K= 1 N./cm.
    Yield Force= 36,124 N.
    Node  150  Z2   K= 11,993 N./cm.   Yield K= 1 N./cm.
    Yield Force= 36,124 N.
 SIF's & TEE's
    Node  150   Welding Tee
 ------------------------------------------------------------------------
 From  150  To  220  DX= -1,980.000 mm.  DY= .000 mm.  DZ= .000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 203,308,080 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
```

INPUT LISTING

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 150 X2 K= 604 N./cm. Yield K= 1 N./cm. Yield Force= 1,820 N.

Node 150 Z2 K= 13,539 N./cm. Yield K= 1 N./cm.

Yield Force= 40,779 N.

Node 150 Y2 K= 13,539 N./cm. Yield K= 1 N./cm.

Yield Force= 40,779 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 220 To 229 DX= -2,365.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 220 X2 K= 2,048 N./cm. Yield K= 1 N./cm. Yield Force= 6,169 N.

Node 220 Z2 K= 45,881 N./cm. Yield K= 1 N./cm.

Yield Force= 138,195 N.

Node 220 Y2 K= 45,881 N./cm. Yield K= 1 N./cm.

Yield Force= 138,195 N.

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 229 To 230 DX= -2,365.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 230 X2 K= 1,444 N./cm. Yield K= 1 N./cm. Yield Force= 4,349 N.

Node 230 Z2 K= 32,343 N./cm. Yield K= 1 N./cm.

Yield Force= 97,416 N.

Node 230 Y2 K= 32,343 N./cm. Yield K= 1 N./cm.

Yield Force= 97,416 N.

SIF's & TEE's

Node 230 Unreinforced Tee

From 230 To 231 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

T1= 90 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

INPUT LISTING

Node 230 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 230 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 230 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 231 To 232 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

RESTRAINTS

Node 232 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 232 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 232 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

From 232 To 1600 DY= 960.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1599

Angle/Node @2= .00 1598

From 1600 To 8300 DZ= 1,005.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 8300 To 8310 DZ= 946.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 3,100.15 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 8310 To 8320 DZ= 349.000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 8320 +Y

Node 8320 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 8320 To 1610 DZ= 3,500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

INPUT LISTING

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 1610 To 1650 DZ= 4,900.000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

DISPLACEMENTS

Node 1650 DX1= .000 mm. DY1= .000 mm. DZ1= -3.000 mm. RX1= .000

RY1= .000 RZ1= .000

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 230 To 240 DX= -3,140.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 508.000 mm. Wall= 14.300 mm. Insul= .000 mm.

INPUT LISTING

GENERAL

T1= 44 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 203,308,080 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 230 X2 K= 959 N./cm. Yield K= 1 N./cm. Yield Force= 2,887 N.

Node 230 Z2 K= 21,471 N./cm. Yield K= 1 N./cm.

Yield Force= 64,669 N.

Node 230 Y2 K= 21,471 N./cm. Yield K= 1 N./cm.

Yield Force= 64,669 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 240 To 249 DX= -2,180.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

RESTRAINTS

Node 240 X2 K= 2,289 N./cm. Yield K= 1 N./cm. Yield Force= 6,896 N.

Node 240 Z2 K= 51,283 N./cm. Yield K= 1 N./cm.

Yield Force= 154,465 N.

Node 240 Y2 K= 51,283 N./cm. Yield K= 1 N./cm.

Yield Force= 154,465 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 249 To 250 DX= -2,180.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 250 X2 K= 1,331 N./cm. Yield K= 1 N./cm. Yield Force= 4,009 N.

Node 250 Z2 K= 29,813 N./cm. Yield K= 1 N./cm.

Yield Force= 89,796 N.

Node 250 Y2 K= 29,813 N./cm. Yield K= 1 N./cm.

Yield Force= 89,796 N.

SIF's & TEE's

Node 250 Unreinforced Tee

From 250 To 252 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

T1= 90 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

INPUT LISTING

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 250 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 250 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 250 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 252 To 253 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

RESTRAINTS

Node 253 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 253 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 253 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

From 253 To 1700 DY= 960.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1699

Angle/Node @2= .00 1698

From 1700 To 8200 DZ= 1,005.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 8200 To 8210 DZ= 946.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

INPUT LISTING

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 3,100.15 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 8210 To 8220 DZ= 349.000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 8220 +Y

Node 8220 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

INPUT LISTING

From 8220 To 1710 DZ= 3,500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 1710 To 1750 DZ= 4,900.000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

DISPLACEMENTS

Node 1750 DX1= .000 mm. DY1= .000 mm. DZ1= -3.000 mm. RX1= .000

RY1= .000 RZ1= .000

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 250 To 260 DX= -3,140.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 508.000 mm. Wall= 14.300 mm. Insul= .000 mm.

GENERAL

T1= 44 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 203,308,080 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 250 X2 K= 959 N./cm. Yield K= 1 N./cm. Yield Force= 2,887 N.

Node 250 Z2 K= 21,471 N./cm. Yield K= 1 N./cm.

Yield Force= 64,669 N.

Node 250 Y2 K= 21,471 N./cm. Yield K= 1 N./cm.

Yield Force= 64,669 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 260 To 269 DX= -2,180.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 260 X2 K= 2,289 N./cm. Yield K= 1 N./cm. Yield Force= 6,896 N.

Node 260 Z2 K= 51,283 N./cm. Yield K= 1 N./cm.

Yield Force= 154,465 N.

Node 260 Y2 K= 51,283 N./cm. Yield K= 1 N./cm.

Yield Force= 154,465 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 269 To 270 DX= -2,180.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 270 X2 K= 1,331 N./cm. Yield K= 1 N./cm. Yield Force= 4,009 N.

Node 270 Z2 K= 29,813 N./cm. Yield K= 1 N./cm.

Yield Force= 89,796 N.

Node 270 Y2 K= 29,813 N./cm. Yield K= 1 N./cm.

Yield Force= 89,796 N.

SIF's & TEE's

Node 270 Unreinforced Tee

INPUT LISTING

From 270 To 272 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

T1= 90 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 270 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 270 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 270 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 272 To 273 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

RESTRAINTS

Node 273 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 273 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

INPUT LISTING

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    Yield Force= 26,476 N.

    Node  273  Z2   K= 10,268 N./cm.   Yield K= 1 N./cm.

    Yield Force= 26,476 N.

 ---------------------------------------------------------------------------

 From  273  To  1800 DY= 960.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1799

    Angle/Node @2= .00 1798

 ---------------------------------------------------------------------------

 From  1800  To  8100 DZ= 1,005.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

 ALLOWABLE STRESSES

    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa

    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa

    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
```

INPUT LISTING

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From  8100  To  8110 DZ= 946.000 mm.

GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

RIGID  Weight= 3,100.15 N.

ALLOWABLE STRESSES

   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa

   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa

   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa

-------------------------------------------------------------------------------

From  8110  To  8120 DZ= 349.000 mm.

PIPE

   Dia= 273.050 mm.   Wall= 14.300 mm.   Insul= .000 mm.

GENERAL

   P1=7001.1592 KPa   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)

   E= 203,308,080 KPa   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa

   EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa

   EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa

   EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

RESTRAINTS

   Node  8120  +Y
```

INPUT LISTING

Node 8120 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 8120 To 1810 DZ= 3,500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 1810 To 1850 DZ= 4,900.000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

```
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
DISPLACEMENTS
   Node  1850   DX1= .000 mm.   DY1= .000 mm.   DZ1= -3.000 mm.   RX1= .000
   RY1= .000   RZ1= .000
ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
---------------------------------------------------------------------------
From  270  To  289  DX= -3,750.000 mm.  DY= .000 mm.  DZ= .000 mm.
PIPE
   Dia= 508.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.
GENERAL
   T1= 44 C   PHyd********* KPa   Mat= (446)PSL2 L485(X70)
   E= 203,308,080 KPa   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa
   EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
   EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
   EH9= 203,308,080 KPa   v = .300   Density= .0000 kg./cu.cm.
   Insul= .0000 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node  270  X2   K= 2,289 N./cm.   Yield K= 1 N./cm.   Yield Force= 6,896 N.
   Node  270  Z2   K= 51,283 N./cm.   Yield K= 1 N./cm.
   Yield Force= 154,465 N.
   Node  270  Y2   K= 51,283 N./cm.   Yield K= 1 N./cm.
   Yield Force= 154,465 N.
ALLOWABLE STRESSES
```

INPUT LISTING

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 289 To 290 DX= -3,750.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 290 X2 K= 2,289 N./cm. Yield K= 1 N./cm. Yield Force= 6,896 N.

Node 290 Z2 K= 51,283 N./cm. Yield K= 1 N./cm.

Yield Force= 154,465 N.

Node 290 Y2 K= 51,283 N./cm. Yield K= 1 N./cm.

Yield Force= 154,465 N.

SIF's & TEE's

Node 290 Unreinforced Tee

From 290 To 292 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

T1= 90 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 290 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

INPUT LISTING

Node 290 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 290 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 415,009 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 245,006 KPa

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From 292 To 293 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

RESTRAINTS

Node 293 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 293 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 293 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

From 293 To 2100 DY= 960.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2099

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   Angle/Node @2= .00 2098
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 From  2100  To  8000 DZ= 1,005.000 mm.
 GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
 ---------------------------------------------------------------------------
 From  8000  To  8010 DZ= 946.000 mm.
 GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 RIGID  Weight= 3,100.15 N.
 ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
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CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

INPUT LISTING

From 8010 To 8020 DZ= 349.000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 8020 +Y

Node 8020 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 8020 To 2110 DZ= 3,500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

INPUT LISTING

```
 ALLOWABLE STRESSES
    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
 ---------------------------------------------------------------------------
 From  2110  To  2150 DZ= 4,900.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 11.100 mm.   Insul= .000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 DISPLACEMENTS
    Node  2150   DX1= .000 mm.   DY1= .000 mm.   DZ1= -3.000 mm.   RX1= .000
    RY1= .000   RZ1= .000
 ALLOWABLE STRESSES
    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
 ---------------------------------------------------------------------------
 From  290  To  299  DX= -150.000 mm.  DY= .000 mm.  DZ= .000 mm.
 PIPE
    Dia= 508.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.
 GENERAL
```

INPUT LISTING

T1= 44 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 203,308,080 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 290 X2 K= 92 N./cm. Yield K= 1 N./cm. Yield Force= 276 N.

Node 290 Z2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

Node 290 Y2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 415,009 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 245,006 KPa

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From 299 To 300 DX= -150.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 300 X2 K= 92 N./cm. Yield K= 1 N./cm. Yield Force= 276 N.

Node 300 Z2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

Node 300 Y2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

From 150 To 160 DX= 3,020.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 508.000 mm. Wall= 14.300 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

INPUT LISTING

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 150 X2 K= 922 N./cm. Yield K= 1 N./cm. Yield Force= 2,777 N.

Node 150 Z2 K= 20,650 N./cm. Yield K= 1 N./cm.

Yield Force= 62,198 N.

Node 150 Y2 K= 20,650 N./cm. Yield K= 1 N./cm.

Yield Force= 62,198 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 160 To 179 DX= 2,635.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 203,308,080 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 160 X2 K= 2,531 N./cm. Yield K= 1 N./cm. Yield Force= 7,622 N.

Node 160 Z2 K= 56,685 N./cm. Yield K= 1 N./cm.

Yield Force= 170,735 N.

Node 160 Y2 K= 56,685 N./cm. Yield K= 1 N./cm.

Yield Force= 170,735 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 179 To 180 DX= 2,635.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 180 X2 K= 1,609 N./cm. Yield K= 1 N./cm. Yield Force= 4,845 N.

Node 180 Z2 K= 36,035 N./cm. Yield K= 1 N./cm.

Yield Force= 108,537 N.

Node 180 Y2 K= 36,035 N./cm. Yield K= 1 N./cm.

Yield Force= 108,537 N.

SIF's & TEE's

Node 180 Unreinforced Tee

From 180 To 182 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

GENERAL

T1= 90 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 180 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 180 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 180 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 182 To 183 DX= .000 mm. DY= 877.000 mm. DZ= .000 mm.

RESTRAINTS

Node 183 Y2 K= 237 N./cm. Yield K= 1 N./cm. Yield Force= 612 N.

Node 183 X2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

Node 183 Z2 K= 10,268 N./cm. Yield K= 1 N./cm.

Yield Force= 26,476 N.

From 183 To 1500 DY= 960.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

INPUT LISTING

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1499

From 1500 To 8400 DZ= 1,005.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

From 8400 To 8410 DZ= 946.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 3,100.15 N.

From 8410 To 8420 DZ= 349.000 mm.

PIPE

Dia= 219.075 mm. Wall= 11.100 mm. Insul= .000 mm.

INPUT LISTING

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 GENERAL
    P1=7001.1592 KPa   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  8420  +Y
    Node  8420  X   Gap= 2.000 mm.
 ---------------------------------------------------------------------------
 From  8420  To  1510 DZ= 3,500.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
 ---------------------------------------------------------------------------
 From  1510  To  1550 DZ= 4,900.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 11.100 mm.   Insul= .000 mm.
```

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INPUT LISTING

```
 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

 DISPLACEMENTS

    Node  1550   DX1= .000 mm.   DY1= .000 mm.   DZ1= -3.000 mm.   RX1= .000

    RY1= .000   RZ1= .000

 ALLOWABLE STRESSES

    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa

    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa

    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa

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 From  180  To  189  DX= 150.000 mm.  DY= .000 mm.  DZ= .000 mm.

 PIPE

    Dia= 508.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.

 GENERAL

    T1= 44 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)

    E= 203,308,080 KPa   EH1= 203,308,080 KPa   EH2= 203,308,080 KPa

    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa

    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa

    EH9= 203,308,080 KPa   v = .300   Density= .0000 kg./cu.cm.

    Insul= .0000 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

 RESTRAINTS

    Node  180  X2   K= 92 N./cm.   Yield K= 1 N./cm.   Yield Force= 276 N.
```

INPUT LISTING

Node 180 Z2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

Node 180 Y2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 189 To 190 DX= 150.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 190 X2 K= 92 N./cm. Yield K= 1 N./cm. Yield Force= 276 N.

Node 190 Z2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

Node 190 Y2 K= 2,051 N./cm. Yield K= 1 N./cm. Yield Force= 6,179 N.

From 30 To 35 DZ= 558.000 mm.

PIPE

Dia= 762.000 mm. Wall= 17.500 mm. Insul= .000 mm.

GENERAL

T1= 49 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 35 To 40 DZ= 1,300.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

From 40 To 50 DZ= 205.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,386.32 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 50 To 60 DZ= 1,737.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight=84,017.20 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 60 To 70 DZ= 205.000 mm.

PIPE

Dia= 762.000 mm. Wall= 14.300 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,386.32 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 70 To 75 DZ= 322.500 mm.

INPUT LISTING

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 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

 RESTRAINTS

    Node  75  +Y

 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

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 From  75  To  80 DZ= 322.500 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

 SIF's & TEE's

    Node  80   Weldolet   Pad= 14.300 mm.

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 From  80  To  5495  DX= 700.000 mm.

 PIPE

    Dia= 219.075 mm.   Wall= 9.500 mm.   Insul= .000 mm.
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INPUT LISTING

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 GENERAL

    T1= 90 C   PHyd********* KPa   Mat= (446)PSL2 L485(X70)

    E= 203,308,080 KPa   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa

    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa

    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa

    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 ALLOWABLE STRESSES

    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa

    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa

    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa

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 From  5495  To  5500  DX= 500.000 mm.

 GENERAL

    PHyd********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5501

 ALLOWABLE STRESSES

    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa

    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa

    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa

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INPUT LISTING

From 5500 To 5510 DZ= -305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 5510 To 5520 DZ= -806.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,004.30 N.

From 5520 To 5530 DZ= -1,886.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 5530 To 5540 DZ= -140.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 530.03 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 5540 To 5550 DZ= -108.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

INPUT LISTING

```
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
-------------------------------------------------------------------------------
From  5550  To  5560 DZ= -405.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
BEND at "TO" end
   Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5559
RESTRAINTS
   Node  5560  +Y
ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
-------------------------------------------------------------------------------
From  5560  To  5570 DY= 305.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
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EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 5570 To 5580 DY= 946.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight= 3,100.15 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 5580 To 5590 DY= 202.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

INPUT LISTING

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

REDUCER

Diam2= 323.850 mm. Wall2= 8.382 mm. Angle= 14.60

From 5590 To 5595 DY= 3,411.000 mm.

PIPE

Dia= 323.850 mm. Wall= 8.382 mm. Insul= .000 mm.

GENERAL

P1= 9.8062 KPa PHyd= 686.4357 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 5595 To 5600 DY= 1,500.000 mm.

GENERAL

PHyd= 686.4357 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 457.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 5599

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 5600 To 5605 DZ= 700.000 mm.

GENERAL

PHyd= 686.4357 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 5605 +Y

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 5605 To 5610 DZ= 3,050.000 mm.

INPUT LISTING

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 GENERAL
    PHyd= 686.4357 KPa   Mat= (177)A333 6   E= 203,395,456 KPa
    EH1= 198,817,856 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa
    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa
    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa
    v = .292   Density= .0078 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 5609
 ------------------------------------------------------------------------
 From  5610  To  5620  DX= -809.000 mm.  DY= -809.000 mm.
 GENERAL
    PHyd= 686.4357 KPa   Mat= (177)A333 6   E= 203,395,456 KPa
    EH1= 198,817,856 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa
    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa
    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa
    v = .292   Density= .0078 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 DISPLACEMENTS
    Node  5620   DX1= 77.011 mm.   DY1= .000 mm.   DZ1= -6.442 mm.   RX1= -.000
    RY1= -.048   RZ1= .000
 SIF's & TEE's
    Node  5620   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.3 (2006)       Sc= 137,895 KPa   Sh1= 137,895 KPa   Sh2= 137,895 KPa
    Sh3= 137,895 KPa   Sh4= 137,895 KPa   Sh5= 137,895 KPa   Sh6= 137,895 KPa
    Sh7= 137,895 KPa   Sh8= 137,895 KPa   Sh9= 137,895 KPa   Sy= 241,316 KPa
 ------------------------------------------------------------------------
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INPUT LISTING

From 5620 To 2560 DX= 646.000 mm.

PIPE

Dia= 406.400 mm. Wall= 7.925 mm. Insul= .000 mm. Cor= 3.2000 mm.

GENERAL

T1= 154 C PHyd= 686.4357 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 350 To 400 DX= -4,180.000 mm.

PIPE

Dia= 323.850 mm. Wall= 14.275 mm. Insul= .000 mm.

GENERAL

T1= 49 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 400 To 410 DX= -2,542.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 420 To 1294 DX= .000 mm. DY= 831.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 9.500 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

INPUT LISTING

Node 420 Y2 K= 210 N./cm. Yield K= 1 N./cm. Yield Force= 541 N.

Node 420 X2 K= 9,729 N./cm. Yield K= 1 N./cm. Yield Force= 25,088 N.

Node 420 Z2 K= 9,729 N./cm. Yield K= 1 N./cm. Yield Force= 25,088 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 415,009 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 245,006 KPa

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From 1294 To 1295 DX= .000 mm. DY= 831.000 mm. DZ= .000 mm.

RESTRAINTS

Node 1295 Y2 K= 210 N./cm. Yield K= 1 N./cm. Yield Force= 541 N.

Node 1295 X2 K= 9,729 N./cm. Yield K= 1 N./cm.

Yield Force= 25,088 N.

Node 1295 Z2 K= 9,729 N./cm. Yield K= 1 N./cm.

Yield Force= 25,088 N.

From 1295 To 1300 DY= 1,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1299

Angle/Node @2= .00 1298

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 1300 To 1330 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 415,009 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 245,006 KPa

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From 1330 To 1340 DZ= 1,810.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm. Cor= 3.2000 mm.

GENERAL

P1=********* KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

INPUT LISTING

```
    Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 RIGID  Weight=13,146.66 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  1340  To  1350 DZ= 305.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 18.263 mm.   Insul= 40.000 mm.
 GENERAL
    T1= 150 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1349
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  1350  To  1355  DX= 725.000 mm.
 GENERAL
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PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 1355 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1355 To 1360 DX= 950.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 1360 Welding Tee

From 410 To 420 DX= -2,458.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

INPUT LISTING

Dia= 323.850 mm. Wall= 14.275 mm. Insul= .000 mm. Cor= .0000 mm.

GENERAL

T1= 49 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 410 X2 K= 526 N./cm. Yield K= 1 N./cm. Yield Force= 1,439 N.

Node 410 Z2 K= 15,266 N./cm. Yield K= 1 N./cm.

Yield Force= 41,764 N.

Node 410 Y2 K= 15,266 N./cm. Yield K= 1 N./cm.

Yield Force= 41,764 N.

SIF's & TEE's

Node 420 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 420 To 429 DX= -2,521.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

INPUT LISTING

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 420 X2 K= 1,605 N./cm. Yield K= 1 N./cm. Yield Force= 4,392 N.

Node 420 Z2 K= 46,580 N./cm. Yield K= 1 N./cm.

Yield Force= 127,433 N.

Node 420 Y2 K= 46,580 N./cm. Yield K= 1 N./cm.

Yield Force= 127,433 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 429 To 430 DX= -2,521.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 430 X2 K= 1,079 N./cm. Yield K= 1 N./cm. Yield Force= 2,953 N.

Node 430 Z2 K= 31,314 N./cm. Yield K= 1 N./cm.

Yield Force= 85,669 N.

Node 430 Y2 K= 31,314 N./cm. Yield K= 1 N./cm.

Yield Force= 85,669 N.

From 440 To 1989 DX= .000 mm. DY= 831.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 9.500 mm. Insul= .000 mm.

GENERAL

INPUT LISTING

P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 440 Y2 K= 210 N./cm. Yield K= 1 N./cm. Yield Force= 541 N.

Node 440 X2 K= 9,729 N./cm. Yield K= 1 N./cm. Yield Force= 25,088 N.

Node 440 Z2 K= 9,729 N./cm. Yield K= 1 N./cm. Yield Force= 25,088 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 1989 To 1990 DX= .000 mm. DY= 831.000 mm. DZ= .000 mm.

RESTRAINTS

Node 1990 Y2 K= 210 N./cm. Yield K= 1 N./cm. Yield Force= 541 N.

Node 1990 X2 K= 9,729 N./cm. Yield K= 1 N./cm.

Yield Force= 25,088 N.

Node 1990 Z2 K= 9,729 N./cm. Yield K= 1 N./cm.

Yield Force= 25,088 N.

From 1990 To 2000 DY= 1,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

INPUT LISTING

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1999

Angle/Node @2= .00 1998

From 2000 To 2030 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 2030 To 2040 DZ= 1,810.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= .000 mm.

GENERAL

INPUT LISTING

T1= 150 C P1=********* KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 194,956,064 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight=13,146.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 2040 To 2050 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2049

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

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-------------------------------------------------------------------------------

From  2050  To  2060  DX= 725.000 mm.

GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

RESTRAINTS

   Node  2060  +Y

ALLOWABLE STRESSES

   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

-------------------------------------------------------------------------------

From  2060  To  1950  DX= 950.000 mm.

GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

   Node  1950   Welding Tee
```

INPUT LISTING

From 430 To 440 DX= -2,458.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 323.850 mm. Wall= 14.275 mm. Insul= .000 mm.

GENERAL

T1= 49 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 430 X2 K= 526 N./cm. Yield K= 1 N./cm. Yield Force= 1,439 N.

Node 430 Z2 K= 15,266 N./cm. Yield K= 1 N./cm.

Yield Force= 41,764 N.

Node 430 Y2 K= 15,266 N./cm. Yield K= 1 N./cm.

Yield Force= 41,764 N.

SIF's & TEE's

Node 440 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 440 To 449 DX= -2,521.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 440 X2 K= 1,605 N./cm. Yield K= 1 N./cm. Yield Force= 4,392 N.

Node 440 Z2 K= 46,580 N./cm. Yield K= 1 N./cm.

Yield Force= 127,433 N.

Node 440 Y2 K= 46,580 N./cm. Yield K= 1 N./cm.

Yield Force= 127,433 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 449 To 450 DX= -2,521.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 450 X2 K= 1,079 N./cm. Yield K= 1 N./cm. Yield Force= 2,953 N.

Node 450 Z2 K= 31,314 N./cm. Yield K= 1 N./cm.

Yield Force= 85,669 N.

Node 450 Y2 K= 31,314 N./cm. Yield K= 1 N./cm.

Yield Force= 85,669 N.

From 18000 To 1044 DX= .000 mm. DY= 831.000 mm. DZ= .000 mm.

INPUT LISTING

PIPE

Dia= 219.075 mm. Wall= 9.500 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 18000 Y2 K= 210 N./cm. Yield K= 1 N./cm. Yield Force= 541 N.

Node 18000 X2 K= 9,729 N./cm. Yield K= 1 N./cm.

Yield Force= 25,088 N.

Node 18000 Z2 K= 9,729 N./cm. Yield K= 1 N./cm.

Yield Force= 25,088 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 1044 To 1045 DX= .000 mm. DY= 831.000 mm. DZ= .000 mm.

RESTRAINTS

Node 1045 Y2 K= 210 N./cm. Yield K= 1 N./cm. Yield Force= 541 N.

Node 1045 X2 K= 9,729 N./cm. Yield K= 1 N./cm.

Yield Force= 25,088 N.

Node 1045 Z2 K= 9,729 N./cm. Yield K= 1 N./cm.

INPUT LISTING

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    Yield Force= 25,088 N.

 ---------------------------------------------------------------------------

 From  1045  To  1050 DY= 1,000.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1049

    Angle/Node @2= .00 1048

 ---------------------------------------------------------------------------

 From  1050  To  1080 DZ= 305.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 ALLOWABLE STRESSES

    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa

    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa

    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
```

INPUT LISTING

From 1080 To 1090 DZ= 1,810.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= .000 mm. Cor= 3.2000 mm.

GENERAL

T1= 150 C P1=********* KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 194,956,064 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight=13,146.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1090 To 1100 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1099

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 1100 To 1105 DX= 725.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 1105 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 1105 To 1110 DX= 950.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

```
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  1110   Welding Tee
 ----------------------------------------------------------------------------
 From  450  To 18000  DX= -2,458.000 mm.  DY= .000 mm.  DZ= .000 mm.
 PIPE
    Dia= 323.850 mm.   Wall= 14.275 mm.   Insul= .000 mm.
 GENERAL
    T1= 49 C   P1=7001.1592 KPa   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0000 kg./cu.cm.
    Insul= .0000 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  450  X2   K= 526 N./cm.   Yield K= 1 N./cm.   Yield Force= 1,439 N.
    Node  450  Z2   K= 15,266 N./cm.   Yield K= 1 N./cm.
    Yield Force= 41,764 N.
    Node  450  Y2   K= 15,266 N./cm.   Yield K= 1 N./cm.
    Yield Force= 41,764 N.
 SIF's & TEE's
    Node 18000   Welding Tee
 ALLOWABLE STRESSES
    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
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Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 18000 To 460 DX= -5,042.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 18000 X2 K= 1,605 N./cm. Yield K= 1 N./cm. Yield Force= 4,392 N.

Node 18000 Z2 K= 46,580 N./cm. Yield K= 1 N./cm.

Yield Force= 127,433 N.

Node 18000 Y2 K= 46,580 N./cm. Yield K= 1 N./cm.

Yield Force= 127,433 N.

From 460 To 16000 DX= -2,458.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

```
 RESTRAINTS
    Node  460  X2   K= 1,605 N./cm.   Yield K= 1 N./cm.   Yield Force= 4,392 N.
    Node  460  Z2   K= 46,580 N./cm.   Yield K= 1 N./cm.
    Yield Force= 127,433 N.
    Node  460  Y2   K= 46,580 N./cm.   Yield K= 1 N./cm.
    Yield Force= 127,433 N.
 SIF's & TEE's
    Node 16000   Welding Tee
 ---------------------------------------------------------------------------
 From 16000  To  469  DX= -127.000 mm.  DY= .000 mm.  DZ= .000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node 16000  X2   K= 580 N./cm.   Yield K= 1 N./cm.   Yield Force= 1,588 N.
    Node 16000  Z2   K= 16,843 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,080 N.
    Node 16000  Y2   K= 16,843 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,080 N.
 ---------------------------------------------------------------------------
 From  469  To  470  DX= -127.000 mm.  DY= .000 mm.  DZ= .000 mm.
 RESTRAINTS
```

INPUT LISTING

```
   Node  470  X2   K= 54 N./cm.   Yield K= 1 N./cm.   Yield Force= 149 N.
   Node  470  Z2   K= 1,578 N./cm.   Yield K= 1 N./cm.   Yield Force= 4,316 N.
   Node  470  Y2   K= 1,578 N./cm.   Yield K= 1 N./cm.   Yield Force= 4,316 N.
---------------------------------------------------------------------------
From 16000  To  489  DX= .000 mm.  DY= 831.000 mm.  DZ= .000 mm.
PIPE
   Dia= 219.075 mm.   Wall= 9.500 mm.   Insul= .000 mm.
GENERAL
   T1= 49 C   PHyd********* KPa   Mat= (446)PSL2 L485(X70)
   E= 203,308,080 KPa   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa
   EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
   EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
   EH9= 203,308,080 KPa   v = .300   Density= .0000 kg./cu.cm.
   Insul= .0000 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node 16000  Y2   K= 210 N./cm.   Yield K= 1 N./cm.   Yield Force= 541 N.
   Node 16000  X2   K= 9,729 N./cm.   Yield K= 1 N./cm.
   Yield Force= 25,088 N.
   Node 16000  Z2   K= 9,729 N./cm.   Yield K= 1 N./cm.
   Yield Force= 25,088 N.
ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
---------------------------------------------------------------------------
From  489  To  490  DX= .000 mm.  DY= 831.000 mm.  DZ= .000 mm.
```

INPUT LISTING

```
 RESTRAINTS
    Node  490  Y2   K= 210 N./cm.   Yield K= 1 N./cm.   Yield Force= 541 N.
    Node  490  X2   K= 9,729 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,088 N.
    Node  490  Z2   K= 9,729 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,088 N.
 ---------------------------------------------------------------------------
 From  490  To  510 DY= 1,000.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 509
 ALLOWABLE STRESSES
    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
 ---------------------------------------------------------------------------
 From  510  To  540 DZ= 305.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
```

INPUT LISTING

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 540 To 550 DZ= 1,810.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= .000 mm.

GENERAL

T1= 150 C P1=********* KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 194,956,064 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight=13,146.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 550 To 560 DZ= 305.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm.

INPUT LISTING

```
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 559
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------------
 From  560  To  565  DX= 725.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  565  +Y
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
```

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 565 To 570 DX= 950.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 570 Welding Tee

From 570 To 620 DZ= -178.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm. Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 620 To 630 DZ= -1,810.000 mm.

PIPE

Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=13,146.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 630 To 635 DZ= -268.000 mm.

PIPE

Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 635 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 635 To 14030 DZ= -665.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0014029

Angle/Node @2= .0014028

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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INPUT LISTING

From 14030 To 14025 DX= -1,113.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 14025 To 14020 DX= -1,112.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0014019

From 14020 To 14015 DY= 1,800.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0014014

Angle/Node @2= .0014013

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 14015 To 14010 DZ= 1,200.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0014009

Angle/Node @2= .0014008

INPUT LISTING

From 14010 To 707 DX= -1,450.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 707 Unreinforced Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 680 To 750 DX= 5,825.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm. Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 680 X2 K= 5,385 N./cm. Yield K= 1 N./cm. Yield Force= 18,095 N.

Node 680 Z2 K= 44,440 N./cm. Yield K= 1 N./cm.

Yield Force= 149,344 N.

Node 680 Y2 K= 44,440 N./cm. Yield K= 1 N./cm.

Yield Force= 149,344 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 750 To 17000 DX= 675.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 750 X2 K= 6,009 N./cm. Yield K= 1 N./cm. Yield Force= 20,192 N.

Node 750 Z2 K= 49,589 N./cm. Yield K= 1 N./cm.

Yield Force= 166,650 N.

Node 750 Y2 K= 49,589 N./cm. Yield K= 1 N./cm.

Yield Force= 166,650 N.

SIF's & TEE's

Node 17000 Unreinforced Tee

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 17000 To 754 DX= 500.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 17000 X2 K= 1,548 N./cm. Yield K= 1 N./cm. Yield Force= 5,203 N.

Node 17000 Z2 K= 12,779 N./cm. Yield K= 1 N./cm.

Yield Force= 42,944 N.

Node 17000 Y2 K= 12,779 N./cm. Yield K= 1 N./cm.

Yield Force= 42,944 N.

From 754 To 755 DX= 500.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 755 X2 K= 924 N./cm. Yield K= 1 N./cm. Yield Force= 3,107 N.

Node 755 Z2 K= 7,629 N./cm. Yield K= 1 N./cm. Yield Force= 25,638 N.

Node 755 Y2 K= 7,629 N./cm. Yield K= 1 N./cm. Yield Force= 25,638 N.

INPUT LISTING

From 17000 To 4229 DX= .000 mm. DY= 915.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 17000 Y2 K= 422 N./cm. Yield K= 1 N./cm. Yield Force= 1,138 N.

Node 17000 X2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

Node 17000 Z2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 4229 To 4230 DX= .000 mm. DY= 915.000 mm. DZ= .000 mm.

RESTRAINTS

Node 4230 Y2 K= 422 N./cm. Yield K= 1 N./cm. Yield Force= 1,138 N.

Node 4230 X2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

Node 4230 Z2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

From 4230 To 17010 DY= 1,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0017009

Angle/Node @2= .0017008

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 17010 To 17020 DZ= -4,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

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   Fluid= .0000000 kg./cu.cm.
BEND at "TO" end
   Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.0017019
   Angle/Node @2= .0017018
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From 17020  To 17025  DX= 500.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node 17025  +Y
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From 17025  To 17030  DX= 500.000 mm.
GENERAL
```

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0017029

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 17030 To 1225 DZ= 3,465.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 1225 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1225 To 1230 DZ= 268.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 1230 To 1240 DZ= 1,810.000 mm.

PIPE

Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
    Fluid= .0000000 kg./cu.cm.
 RIGID  Weight=13,146.66 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------
 From  1240  To  1110 DZ= 178.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  1110   Welding Tee
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------
 From  1110  To  1250 DZ= 1,128.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
```

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1249

Angle/Node @2= .00 1248

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1250 To 17100 DY= 610.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0017099

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

From 17100 To 17110 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 17110 To 1260 DY= -25.000 mm. DZ= 152.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

```
 REDUCER
    Diam2= 168.275 mm.   Wall2= 15.900 mm.   Angle= 9.50
 ------------------------------------------------------------------------
 From  1260  To  1270 DZ= 286.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 15.900 mm.   Insul= 40.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 DISPLACEMENTS
    Node  1270   DX1= .000 mm.   DY1= .000 mm.   DZ1= .000 mm.   RX1= .000
    RY1= .000   RZ1= .000
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------
 From  755  To  760  DX= 5,825.000 mm.  DY= .000 mm.  DZ= .000 mm.
 PIPE
    Dia= 660.400 mm.   Wall= 49.500 mm.   Insul= 40.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
```

INPUT LISTING

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 755 X2 K= 5,385 N./cm. Yield K= 1 N./cm. Yield Force= 18,095 N.

Node 755 Z2 K= 44,440 N./cm. Yield K= 1 N./cm.

Yield Force= 149,344 N.

Node 755 Y2 K= 44,440 N./cm. Yield K= 1 N./cm.

Yield Force= 149,344 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 760 To 19000 DX= 675.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

```
 RESTRAINTS
    Node  760  X2   K= 6,009 N./cm.   Yield K= 1 N./cm.   Yield Force= 20,192 N.
    Node  760  Z2   K= 49,589 N./cm.   Yield K= 1 N./cm.
    Yield Force= 166,650 N.
    Node  760  Y2   K= 49,589 N./cm.   Yield K= 1 N./cm.
    Yield Force= 166,650 N.
 SIF's & TEE's
    Node 19000   Unreinforced Tee
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From 19000  To  769  DX= 500.000 mm.  DY= .000 mm.  DZ= .000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node 19000  X2   K= 1,548 N./cm.   Yield K= 1 N./cm.   Yield Force= 5,203 N.
    Node 19000  Z2   K= 12,779 N./cm.   Yield K= 1 N./cm.
    Yield Force= 42,944 N.
    Node 19000  Y2   K= 12,779 N./cm.   Yield K= 1 N./cm.
```

```
    Yield Force= 42,944 N.
 ---------------------------------------------------------------------------
 From  769  To  770  DX= 500.000 mm.  DY= .000 mm.  DZ= .000 mm.
 RESTRAINTS
    Node  770  X2   K= 924 N./cm.   Yield K= 1 N./cm.   Yield Force= 3,107 N.
    Node  770  Z2   K= 7,629 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,638 N.
    Node  770  Y2   K= 7,629 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,638 N.
 ---------------------------------------------------------------------------
 From 19000  To  4299  DX= .000 mm.  DY= 915.000 mm.  DZ= .000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 18.263 mm.   Insul= 40.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node 19000  Y2   K= 422 N./cm.   Yield K= 1 N./cm.   Yield Force= 1,138 N.
    Node 19000  X2   K= 11,211 N./cm.   Yield K= 1 N./cm.
    Yield Force= 30,255 N.
    Node 19000  Z2   K= 11,211 N./cm.   Yield K= 1 N./cm.
    Yield Force= 30,255 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
```

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 4299 To 4300 DX= .000 mm. DY= 915.000 mm. DZ= .000 mm.

RESTRAINTS

Node 4300 Y2 K= 422 N./cm. Yield K= 1 N./cm. Yield Force= 1,138 N.

Node 4300 X2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

Node 4300 Z2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

From 4300 To 19010 DY= 1,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0019009

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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INPUT LISTING

From 19010 To 19020 DZ= -4,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0019019

Angle/Node @2= .0019018

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 19020 To 19025 DX= 500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 19025 +Y

INPUT LISTING

```
 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

 ------------------------------------------------------------------------------

 From 19025  To 19030  DX= 500.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.0019029

 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

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 From 19030  To  1925 DZ= 3,465.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
```

INPUT LISTING

```
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node  1925  +Y
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From  1925  To  1930 DZ= 268.000 mm.
PIPE
   Dia= 219.075 mm.   Wall= 18.263 mm.   Insul= 40.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From  1930  To  1940 DZ= 1,810.000 mm.
GENERAL
```

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=13,146.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1940 To 1950 DZ= 178.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 1950 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

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 From  1950  To  1960 DZ= 1,128.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1959

    Angle/Node @2= .00 1958

 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

 ------------------------------------------------------------------------------

 From  1960  To 19100 DY= 610.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end
```

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0019099

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 19100 To 19110 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 19110 To 1970 DZ= 152.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
REDUCER
   Diam2= 168.275 mm.   Wall2= 15.900 mm.   Angle= 9.50
------------------------------------------------------------------------------
From  1970  To  1980 DZ= 289.000 mm.
PIPE
   Dia= 168.275 mm.   Wall= 15.900 mm.   Insul= 40.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
DISPLACEMENTS
   Node  1980   DX1= .000 mm.   DY1= .000 mm.   DZ1= .000 mm.   RX1= .000
   RY1= .000   RZ1= .000
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
------------------------------------------------------------------------------
```

INPUT LISTING

From 770 To 780 DX= 5,825.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 770 X2 K= 5,385 N./cm. Yield K= 1 N./cm. Yield Force= 18,095 N.

Node 770 Z2 K= 44,440 N./cm. Yield K= 1 N./cm.

Yield Force= 149,344 N.

Node 770 Y2 K= 44,440 N./cm. Yield K= 1 N./cm.

Yield Force= 149,344 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 780 To 13000 DX= 675.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 780 X2 K= 6,009 N./cm. Yield K= 1 N./cm. Yield Force= 20,192 N.

Node 780 Z2 K= 49,589 N./cm. Yield K= 1 N./cm.

Yield Force= 166,650 N.

Node 780 Y2 K= 49,589 N./cm. Yield K= 1 N./cm.

Yield Force= 166,650 N.

SIF's & TEE's

Node 13000 Unreinforced Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 13000 To 789 DX= 500.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 13000 X2 K= 1,548 N./cm. Yield K= 1 N./cm. Yield Force= 5,203 N.

Node 13000 Z2 K= 12,779 N./cm. Yield K= 1 N./cm.

Yield Force= 42,944 N.

Node 13000 Y2 K= 12,779 N./cm. Yield K= 1 N./cm.

Yield Force= 42,944 N.

From 789 To 790 DX= 500.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 790 X2 K= 924 N./cm. Yield K= 1 N./cm. Yield Force= 3,107 N.

Node 790 Z2 K= 7,629 N./cm. Yield K= 1 N./cm. Yield Force= 25,638 N.

Node 790 Y2 K= 7,629 N./cm. Yield K= 1 N./cm. Yield Force= 25,638 N.

From 13000 To 4399 DX= .000 mm. DY= 915.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 13000 Y2 K= 422 N./cm. Yield K= 1 N./cm. Yield Force= 1,138 N.

Node 13000 X2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

Node 13000 Z2 K= 11,211 N./cm. Yield K= 1 N./cm.

INPUT LISTING

```
   Yield Force= 30,255 N.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From  4399  To  4400  DX= .000 mm.  DY= 915.000 mm.  DZ= .000 mm.
RESTRAINTS
   Node  4400  Y2   K= 422 N./cm.   Yield K= 1 N./cm.   Yield Force= 1,138 N.
   Node  4400  X2   K= 11,211 N./cm.   Yield K= 1 N./cm.
   Yield Force= 30,255 N.
   Node  4400  Z2   K= 11,211 N./cm.   Yield K= 1 N./cm.
   Yield Force= 30,255 N.
-------------------------------------------------------------------------------
From  4400  To 13010 DY= 1,000.000 mm.
GENERAL
   PHyd********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
BEND at "TO" end
   Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.0013009
   Angle/Node @2= .0013008
ALLOWABLE STRESSES
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B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 13010 To 13020 DZ= -4,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0013019

Angle/Node @2= .0013018

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 13020 To 13025 DX= 500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

```
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node 13025  +Y
 ------------------------------------------------------------------------
 From 13025  To 13030  DX= 500.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.0013029
 ------------------------------------------------------------------------
 From 13030  To  1425 DZ= 3,465.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  1425  +Y
```

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1425 To 1430 DZ= 268.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1430 To 1440 DZ= 1,810.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

```
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RIGID  Weight=13,146.66 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------------
 From  1440  To  1360 DZ= 178.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  1360   Welding Tee
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------------
 From  1360  To  1450 DZ= 1,128.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
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EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 1449

Angle/Node @2= .00 1448

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 1450 To 15100 DY= 613.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0015099

Angle/Node @2= .0015098

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 15100 To 15110 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 15110 To 1460 DY= -25.000 mm. DZ= 152.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

REDUCER

Diam2= 168.275 mm. Wall2= 15.900 mm. Angle= 9.50

From 1460 To 1470 DZ= 286.000 mm.

PIPE

Dia= 168.275 mm. Wall= 15.900 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

DISPLACEMENTS

Node 1470 DX1= .000 mm. DY1= .000 mm. DZ1= .000 mm. RX1= .000

RY1= .000 RZ1= .000

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 790 To 800 DX= 3,325.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

INPUT LISTING

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 790 X2 K= 3,074 N./cm. Yield K= 1 N./cm. Yield Force= 10,329 N.

Node 790 Z2 K= 25,367 N./cm. Yield K= 1 N./cm.

Yield Force= 85,248 N.

Node 790 Y2 K= 25,367 N./cm. Yield K= 1 N./cm.

Yield Force= 85,248 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 800 To 810 DX= 5,000.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

INPUT LISTING

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 800 X2 K= 7,696 N./cm. Yield K= 1 N./cm. Yield Force= 25,862 N.

Node 800 Z2 K= 63,513 N./cm. Yield K= 1 N./cm.

Yield Force= 213,440 N.

Node 800 Y2 K= 63,513 N./cm. Yield K= 1 N./cm.

Yield Force= 213,440 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 810 To 820 DX= 5,000.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 810 X2 K= 9,244 N./cm. Yield K= 1 N./cm. Yield Force= 31,065 N.

Node 810 Z2 K= 76,291 N./cm. Yield K= 1 N./cm.

Yield Force= 256,385 N.

Node 810 Y2 K= 76,291 N./cm. Yield K= 1 N./cm.

Yield Force= 256,385 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 820 To 12000 DX= 675.000 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 820 X2 K= 5,246 N./cm. Yield K= 1 N./cm. Yield Force= 17,629 N.

Node 820 Z2 K= 43,295 N./cm. Yield K= 1 N./cm.

Yield Force= 145,498 N.

Node 820 Y2 K= 43,295 N./cm. Yield K= 1 N./cm.

Yield Force= 145,498 N.

SIF's & TEE's

Node 12000 Unreinforced Tee

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 12000 To 829 DX= 150.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 12000 X2 K= 901 N./cm. Yield K= 1 N./cm. Yield Force= 3,029 N.

Node 12000 Z2 K= 7,438 N./cm. Yield K= 1 N./cm.

Yield Force= 24,998 N.

Node 12000 Y2 K= 7,438 N./cm. Yield K= 1 N./cm.

Yield Force= 24,998 N.

From 829 To 830 DX= 150.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 830 X2 K= 277 N./cm. Yield K= 1 N./cm. Yield Force= 932 N.

Node 830 Z2 K= 2,289 N./cm. Yield K= 1 N./cm. Yield Force= 7,692 N.

Node 830 Y2 K= 2,289 N./cm. Yield K= 1 N./cm. Yield Force= 7,692 N.

INPUT LISTING

From 12000 To 831 DX= .000 mm. DY= 915.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 12000 Y2 K= 422 N./cm. Yield K= 1 N./cm. Yield Force= 1,138 N.

Node 12000 X2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

Node 12000 Z2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 831 To 832 DX= .000 mm. DY= 915.000 mm. DZ= .000 mm.

RESTRAINTS

Node 832 Y2 K= 422 N./cm. Yield K= 1 N./cm. Yield Force= 1,138 N.

Node 832 X2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

INPUT LISTING

Node 832 Z2 K= 11,211 N./cm. Yield K= 1 N./cm.

Yield Force= 30,255 N.

From 832 To 12010 DY= 1,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0012009

Angle/Node @2= .0012008

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 12010 To 12015 DZ= -305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
   Fluid= .0000000 kg./cu.cm.

 ALLOWABLE STRESSES

   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

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 From 12015  To 12017 DZ= -2,000.000 mm.

 GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

 ---------------------------------------------------------------------------

 From 12017  To 12020 DZ= -1,695.000 mm.

 GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

   Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.0012019

   Angle/Node @2= .0012018
```

INPUT LISTING

From 12020 To 12025 DX= 500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 12025 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 12025 To 12030 DX= 500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0012029

INPUT LISTING

From 12030 To 885 DZ= 3,465.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 885 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 885 To 890 DZ= 267.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 890 To 900 DZ= 1,810.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=13,146.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 900 To 910 DZ= 178.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

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    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  910   Welding Tee
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
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 From  910  To  920 DZ= 1,128.000 mm.
 PIPE
    Dia= 219.075 mm.   Wall= 18.263 mm.   Insul= 40.000 mm.
 GENERAL
    T1= 150 C   P1********* KPa   PHyd********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 919
    Angle/Node @2= .00 918
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
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INPUT LISTING

From 920 To 15010 DY= 610.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0015009

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 15010 To 15020 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 15020 To 930 DY= -25.000 mm. DZ= 152.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

REDUCER

Diam2= 168.275 mm. Wall2= 15.900 mm. Angle= 9.50

From 930 To 940 DZ= 286.000 mm.

PIPE

Dia= 168.275 mm. Wall= 15.900 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

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   Fluid= .0000000 kg./cu.cm.
DISPLACEMENTS
   Node  940   DX1= .000 mm.   DY1= .000 mm.   DZ1= .000 mm.   RX1= .000
   RY1= .000   RZ1= .000
-------------------------------------------------------------------------
From  680  To 14000  DX= -1,000.000 mm.  DY= .000 mm.  DZ= .000 mm.
PIPE
   Dia= 660.400 mm.   Wall= 49.500 mm.   Insul= 40.000 mm.   Cor= 3.2000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node  680  X2   K= 924 N./cm.   Yield K= 1 N./cm.   Yield Force= 3,107 N.
   Node  680  Z2   K= 7,629 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,638 N.
   Node  680  Y2   K= 7,629 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,638 N.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------
From 14000  To  690  DX= -675.000 mm.  DY= .000 mm.  DZ= .000 mm.
GENERAL
```

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 14000 X2 K= 1,548 N./cm. Yield K= 1 N./cm. Yield Force= 5,203 N.

Node 14000 Z2 K= 12,779 N./cm. Yield K= 1 N./cm.

Yield Force= 42,944 N.

Node 14000 Y2 K= 12,779 N./cm. Yield K= 1 N./cm.

Yield Force= 42,944 N.

From 690 To 691 DX= -1,009.400 mm. DY= .000 mm. DZ= .000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 690 X2 K= 1,557 N./cm. Yield K= 1 N./cm. Yield Force= 5,233 N.

Node 690 Z2 K= 12,851 N./cm. Yield K= 1 N./cm.

```
    Yield Force= 43,185 N.

    Node  690  Y2   K= 12,851 N./cm.   Yield K= 1 N./cm.

    Yield Force= 43,185 N.

 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

 ------------------------------------------------------------------------------

 From  691  To  692  DX= -410.320 mm.  DY= .000 mm.  DZ= .000 mm.

 BEND at "TO" end

    Radius= 990.600 mm. (LONG)   Bend Angle= 45.000

 RESTRAINTS

    Node  691  X2   K= 1,652 N./cm.   Yield K= 1 N./cm.   Yield Force= 5,553 N.

    Node  691  Z2   K= 13,636 N./cm.   Yield K= 1 N./cm.

    Yield Force= 45,827 N.

    Node  691  Y2   K= 13,636 N./cm.   Yield K= 1 N./cm.

    Yield Force= 45,827 N.

 ------------------------------------------------------------------------------

 From  692  To  700  DX= -580.280 mm.  DY= 580.280 mm.  DZ= .000 mm.

 BEND at "TO" end

    Radius= 990.600 mm. (LONG)   Bend Angle= 45.000

 RESTRAINTS

    Node  692  X2   K= 1,438 N./cm.   Yield K= 1 N./cm.   Yield Force= 4,834 N.

    Dir Vec= -.7071  .7071  .0000

    Node  692  Z2   K= 11,871 N./cm.   Yield K= 1 N./cm.

    Yield Force= 39,894 N.
```

INPUT LISTING

Node 692 X2 K= 11,871 N./cm. Yield K= 1 N./cm.

Yield Force= 39,894 N. Dir Vec= .7071 .7071 .0000

From 700 To 704 DX= .000 mm. DY= 624.860 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 700 Y2 K= 1,495 N./cm. Yield K= 1 N./cm. Yield Force= 5,025 N.

Node 700 X2 K= 12,339 N./cm. Yield K= 1 N./cm.

Yield Force= 41,468 N.

Node 700 Z2 K= 12,339 N./cm. Yield K= 1 N./cm.

Yield Force= 41,468 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 704 To 705 DX= .000 mm. DY= 624.860 mm. DZ= .000 mm.

RESTRAINTS

Node 705 Y2 K= 776 N./cm. Yield K= 1 N./cm. Yield Force= 2,608 N.

Node 705 X2 K= 6,404 N./cm. Yield K= 1 N./cm. Yield Force= 21,521 N.

Node 705 Z2 K= 6,404 N./cm. Yield K= 1 N./cm. Yield Force= 21,521 N.

From 705 To 740 DY= 200.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 740 To 745 DY= 2,200.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 745 To 707 DY= 400.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 707 Unreinforced Tee

From 707 To 710 DY= 3,616.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 990.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 709

From 710 To 720 DX= -2,500.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 990.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 719

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 720 To 730 DY= -991.000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 730 To 4000 DY= -496.000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 40.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 4000 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 4000 To 4100 DZ= 505.000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 60.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 4100 To 4110 DZ= 190.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 4110 To 4120 DZ= 4,405.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

```
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4120  +Y
    Node  4120  X   Gap= 2.000 mm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  4120  To  4130 DZ= 6,500.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4130  +Y
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
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INPUT LISTING

From 4130 To 4140 DZ= 3,350.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 4140 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 4140 To 7200 DX= -638.000 mm. DY= 638.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 990.600 mm. (LONG) Bend Angle= 45.000 Angle/Node @1= 22.50 7199

ALLOWABLE STRESSES

INPUT LISTING

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7200 To 7210 DX= -2,613.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7210 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7210 To 7220 DX= -4,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
   Fluid= .0000000 kg./cu.cm.

RESTRAINTS

   Node  7220  +Y

ALLOWABLE STRESSES

   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

-------------------------------------------------------------------------------

From  7220  To  7230  DX= -7,000.000 mm.

GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

RESTRAINTS

   Node  7230  +Y

ALLOWABLE STRESSES

   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

-------------------------------------------------------------------------------

From  7230  To  7240  DX= -6,800.000 mm.

GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
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INPUT LISTING

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 7240 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7240 To 7600 DZ= 495.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7600 To 7610 DY= 76.000 mm. DZ= 610.000 mm.

INPUT LISTING

```
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 REDUCER
    Diam2= 508.000 mm.   Wall2= 38.100 mm.   Angle= 7.20
 ------------------------------------------------------------------------------
 From  7610  To  7615 DZ= 254.000 mm.
 PIPE
    Dia= 508.000 mm.   Wall= 38.100 mm.   Insul= 60.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
```

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7615 To 7620 DY= 51.000 mm. DZ= 508.000 mm.

PIPE

Dia= 508.000 mm. Wall= 38.100 mm. Insul= 60.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7615 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

REDUCER

Diam2= 406.400 mm. Wall2= 30.963 mm. Angle= 5.80

From 7620 To 7650 DZ= 1,257.000 mm.

PIPE

Dia= 406.400 mm. Wall= 30.963 mm. Insul= 60.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=37,279.86 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7650 To 7660 DZ= 3,526.000 mm.

PIPE

Dia= 406.400 mm. Wall= 30.963 mm. Insul= 60.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7660 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7660 To 7670 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7670 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7670 To 7680 DZ= 3,400.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

BEND at "TO" end

Radius= 609.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7679

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7680 To 7690 DX= -5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7690 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7690 To 7700 DX= -1,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 609.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7699

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7700 To 7710 DZ= 8,200.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 609.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7709

Angle/Node @2= .00 7708

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

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From  7710  To  7720  DX= 1,000.000 mm.

GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

RESTRAINTS

   Node  7720  +Y

ALLOWABLE STRESSES

   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

-------------------------------------------------------------------------------

From  7720  To  7730  DX= 5,000.000 mm.

GENERAL

   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

   Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

   Radius= 609.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7729
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Angle/Node @2= .00 7728

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7730 To 7740 DZ= 3,400.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7740 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7740 To 7750 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7750 +Y

Node 7750 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7750 To 7760 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7760 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

INPUT LISTING

From 7760 To 7770 DZ= 569.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7770 To 7780 DZ= 3,931.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

INPUT LISTING

From 7780 To 7790 DZ= 500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7790 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7790 To 7800 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7800 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7800 To 7810 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7810 +Y

Node 7810 Z Gap= 2.000 mm.

Node 7810 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7810 To 7820 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7820 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7820 To 7830 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7830 +Y

Node 7830 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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INPUT LISTING

From 7830 To 7840 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7840 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7840 To 7850 DZ= 569.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7850 To 7860 DZ= 3,931.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7860 To 7870 DZ= 500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7870 +Y

Node 7870 X Gap= 10.000 mm.

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7870 To 7880 DZ= 5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7880 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7880 To 7890 DZ= 300.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

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From 7240 To 7250 DZ= -495.000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 60.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7250 To 7260 DY= 76.000 mm. DZ= -610.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

REDUCER

Diam2= 508.000 mm. Wall2= 38.100 mm. Angle= 7.20

From 7260 To 7270 DZ= -1,537.000 mm.

PIPE

Dia= 508.000 mm. Wall= 38.100 mm. Insul= 60.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=74,265.71 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

From 7270 To 7280 DZ= -708.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7280 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7280 To 7290 DZ= -569.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7290 To 7295 DZ= -3,931.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7295 To 7300 DZ= -500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7300 +Y

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7300 To 7320 DZ= -5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7320 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7320 To 7330 DZ= -5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

```
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  7330  +Y
    Node  7330  Z   Gap= 2.000 mm.
    Node  7330  X   Gap= 2.000 mm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  7330  To  7340 DZ= -5,000.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  7340  +Y
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
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INPUT LISTING

From 7340 To 7350 DZ= -5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7350 +Y

Node 7350 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7350 To 7370 DZ= -5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7370 +Y

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7370 To 7373 DZ= -569.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7373 To 7376 DZ= -3,931.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7376 To 7380 DZ= -500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7380 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7380 To 7400 DZ= -5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

```
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  7400  +Y
    Node  7400  X   Gap= 2.000 mm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------
 From  7400  To  7410 DZ= -3,150.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 762.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7409
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------
 From  7410  To  7415  DX= -5,000.000 mm.
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INPUT LISTING

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 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  7415  +Y
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  7415  To  7420  DX= -1,000.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 762.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7419
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
```

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7420 To 7430 DZ= -4,350.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7430 To 7440 DZ= -4,350.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7439

INPUT LISTING

```
   Angle/Node @2= .00 7438
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From  7440  To  7445  DX= 1,000.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node  7445  +Y
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From  7445  To  7450  DX= 5,000.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
```

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 7449

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 7450 To 7460 DZ= -3,150.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7460 +Y

Node 7460 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

INPUT LISTING

From 7460 To 7480 DZ= -5,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7480 +Y

Node 7480 Z Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7480 To 7482 DZ= -569.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

INPUT LISTING

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7482 To 7485 DZ= -3,931.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7485 To 7490 DZ= -500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7490 +Y

Node 7490 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7490 To 7500 DZ= -300.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 4140 To 4150 DZ= 850.000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 60.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

INPUT LISTING

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 4000 To 4005 DZ= -900.000 mm.

PIPE

Dia= 660.400 mm. Wall= 49.500 mm. Insul= 60.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 4005 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 4005 To 4010 DZ= -4,500.000 mm.

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INPUT LISTING

```
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4010  +Y
 ------------------------------------------------------------------------
 From  4010  To  4020 DZ= -5,500.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4020  +Y
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------
 From  4020  To  4030 DZ= -5,500.000 mm.
```

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Job: PROYECTO FINAL DE CARRERA Ibán López García

INPUT LISTING

```
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4030  +Y
    Node  4030  X   Gap= 4.000 mm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  4030  To  4040 DZ= -5,000.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  4040  +Y
 ALLOWABLE STRESSES
```

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 4040 To 4050 DZ= -8,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 4050 +Y

Node 4050 X Gap= 4.000 mm.

Node 4050 Z Gap= 4.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 4050 To 7000 DZ= -5,500.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7000 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7000 To 7010 DZ= -6,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7010 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7010 To 7030 DZ= -5,650.000 mm.

INPUT LISTING

```
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 990.600 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 7031
    Angle/Node @2= .00 7032
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  7030  To  7040  DX= 4,500.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  7040  +Y
 ALLOWABLE STRESSES
```

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7040 To 7050 DX= 1,684.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7050 To 7060 DX= 5,316.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

INPUT LISTING

Node 7060 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7060 To 7070 DX= 1,684.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7070 To 7080 DX= 5,316.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node  7080  +Y
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From  7080  To  7090  DX= 1,684.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
-------------------------------------------------------------------------------
From  7090  To  7100  DX= 5,316.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
```

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 7100 +Y

Node 7100 Z Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 7100 To 7110 DX= 200.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 570 To 580 DZ= 1,128.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= 40.000 mm. Cor= .0000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 579

Angle/Node @2= .00 578

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 580 To 16010 DY= 610.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.0016009

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

From 16010 To 16020 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 16020 To 590 DY= -25.000 mm. DZ= 152.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

```
 REDUCER
    Diam2= 168.275 mm.   Wall2= 15.900 mm.   Angle= 9.50
 ------------------------------------------------------------------------------
 From  590  To  600 DZ= 286.000 mm.
 PIPE
    Dia= 168.275 mm.   Wall= 15.900 mm.   Insul= 40.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 DISPLACEMENTS
    Node  600   DX1= .000 mm.   DY1= .000 mm.   DZ1= .000 mm.   RX1= .000
    RY1= .000   RZ1= .000
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ------------------------------------------------------------------------------
 From  350  To 15000  DX= 5,820.000 mm.  DY= .000 mm.  DZ= .000 mm.
 PIPE
    Dia= 323.850 mm.   Wall= 14.275 mm.   Insul= .000 mm.
 GENERAL
    T1= 49 C   P1=7001.1592 KPa   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
```

INPUT LISTING

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0000 kg./cu.cm.

Insul= .0000 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 350 X2 K= 1,246 N./cm. Yield K= 1 N./cm. Yield Force= 3,408 N.

Node 350 Z2 K= 36,146 N./cm. Yield K= 1 N./cm.

Yield Force= 98,888 N.

Node 350 Y2 K= 36,146 N./cm. Yield K= 1 N./cm.

Yield Force= 98,888 N.

SIF's & TEE's

Node 15000 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 15000 To 379 DX= 127.000 mm. DY= .000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

RESTRAINTS

Node 15000 X2 K= 1,300 N./cm. Yield K= 1 N./cm. Yield Force= 3,557 N.

Node 15000 Z2 K= 37,724 N./cm. Yield K= 1 N./cm.

Yield Force= 103,203 N.

Node 15000 Y2 K= 37,724 N./cm. Yield K= 1 N./cm.

Yield Force= 103,203 N.

From 379 To 380 DX= 127.000 mm. DY= .000 mm. DZ= .000 mm.

RESTRAINTS

Node 380 X2 K= 54 N./cm. Yield K= 1 N./cm. Yield Force= 149 N.

Node 380 Z2 K= 1,578 N./cm. Yield K= 1 N./cm. Yield Force= 4,316 N.

Node 380 Y2 K= 1,578 N./cm. Yield K= 1 N./cm. Yield Force= 4,316 N.

From 15000 To 382 DX= .000 mm. DY= 831.000 mm. DZ= .000 mm.

PIPE

Dia= 219.075 mm. Wall= 9.500 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 15000 Y2 K= 210 N./cm. Yield K= 1 N./cm. Yield Force= 541 N.

Node 15000 X2 K= 9,729 N./cm. Yield K= 1 N./cm.

```
    Yield Force= 25,088 N.

    Node 15000  Z2   K= 9,729 N./cm.   Yield K= 1 N./cm.

    Yield Force= 25,088 N.

 ALLOWABLE STRESSES

    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa

    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa

    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa

 ---------------------------------------------------------------------------

 From  382  To  383  DX= .000 mm.  DY= 831.000 mm.  DZ= .000 mm.

 RESTRAINTS

    Node  383  Y2   K= 210 N./cm.   Yield K= 1 N./cm.   Yield Force= 541 N.

    Node  383  X2   K= 9,729 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,088 N.

    Node  383  Z2   K= 9,729 N./cm.   Yield K= 1 N./cm.   Yield Force= 25,088 N.

 ---------------------------------------------------------------------------

 From  383  To  1010 DY= 1,000.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 1009

    Angle/Node @2= .00 1008

 ---------------------------------------------------------------------------
```

INPUT LISTING

From 1010 To 980 DZ= 305.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 980 To 970 DZ= 1,810.000 mm.

PIPE

Dia= 219.075 mm. Wall= 18.263 mm. Insul= .000 mm.

GENERAL

T1= 150 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 194,956,064 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RIGID Weight=13,146.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 970 To 960 DZ= 308.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 959

Angle/Node @2= .00 958

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 960 To 965 DX= 725.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 194,956,064 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  965  +Y
 ------------------------------------------------------------------------
 From  965  To  910  DX= 950.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 194,956,064 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  910   Welding Tee
 ------------------------------------------------------------------------
 From  80  To  81 DZ= 600.000 mm.
 PIPE
    Dia= 762.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.
 GENERAL
    T1= 49 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
```

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 81 To 83 DZ= 350.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 83 Weldolet

From 83 To 2200 DY= 4,209.000 mm.

PIPE

Dia= 168.275 mm. Wall= 7.112 mm. Insul= .000 mm.

GENERAL

T1= 90 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2199

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 2200 To 2205 DZ= 950.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 2205 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 2205 To 2210 DZ= 1,550.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2211

From 2210 To 2215 DX= 2,476.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 228.600 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 2214

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 2215 To 2220 DZ= -1,550.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

```
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  2220  +Y
 ALLOWABLE STRESSES
    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
 ---------------------------------------------------------------------------
 From  2220  To  2225 DZ= -950.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  2225   Welding Tee
 ---------------------------------------------------------------------------
 From  83  To  105 DZ= 241.000 mm.
 PIPE
    Dia= 762.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.
 GENERAL
    T1= 49 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
```

INPUT LISTING

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 105 To 110 DZ= 1,300.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 110 To 85 DZ= 559.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  85   Welding Tee   Pad= 14.300 mm.
 ---------------------------------------------------------------------------
 From  85  To  360  DX= 930.000 mm.
 PIPE
    Dia= 323.850 mm.   Wall= 14.275 mm.   Insul= .000 mm.
 GENERAL
    T1= 49 C   PHyd********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 457.200 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 339
    Angle/Node @2= .00 338
 ALLOWABLE STRESSES
    B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
    Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
    Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
 ---------------------------------------------------------------------------
 From  360  To  340 DZ= -1,300.000 mm.
 GENERAL
    PHyd********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
```

INPUT LISTING

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 457.200 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 341

From 340 To 346 DY= -786.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 346 To 349 DX= .000 mm. DY= -831.000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 346 Y2 K= 356 N./cm. Yield K= 1 N./cm. Yield Force= 973 N.

Node 346 X2 K= 10,322 N./cm. Yield K= 1 N./cm.

Yield Force= 28,239 N.

Node 346 Z2 K= 10,322 N./cm. Yield K= 1 N./cm.

Yield Force= 28,239 N.

From 349 To 350 DX= .000 mm. DY= -831.000 mm. DZ= .000 mm.

RESTRAINTS

Node 350 Y2 K= 356 N./cm. Yield K= 1 N./cm. Yield Force= 973 N.

Node 350 X2 K= 10,322 N./cm. Yield K= 1 N./cm.

Yield Force= 28,239 N.

Node 350 Z2 K= 10,322 N./cm. Yield K= 1 N./cm.

Yield Force= 28,239 N.

SIF's & TEE's

Node 350 Welding Tee

From 2225 To 2300 DX= -285.000 mm.

PIPE

Dia= 168.275 mm. Wall= 7.112 mm. Insul= .000 mm.

GENERAL

T1= 90 C PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

INPUT LISTING

```
   Node  2300  +Y
SIF's & TEE's
   Node  2300   Welding Tee
ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
-------------------------------------------------------------------------------
From  2300  To  3200 DY= 970.000 mm.
PIPE
   Dia= 88.900 mm.   Wall= 5.486 mm.   Insul= .000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sh1= 485,000 KPa   Sh2= 485,000 KPa   Sh3= 485,000 KPa
   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa   Sh7= 485,000 KPa
   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,000 KPa
-------------------------------------------------------------------------------
From  3200  To  3210 DY= 528.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
```

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 687.03 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3210 To 3220 DY= 322.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3220 To 3240 DY= 270.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 383.02 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3240 To 3250 DX= 260.000 mm.

PIPE

Dia= 114.300 mm. Wall= 6.020 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 383.02 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

INPUT LISTING

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3250 To 3260 DX= 152.000 mm.

PIPE

Dia= 114.300 mm. Wall= 6.020 mm. Insul= .000 mm. Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

REDUCER

Diam2= 219.075 mm. Wall2= 6.350 mm. Angle= 19.02

From 3260 To 3280 DX= 182.000 mm.

PIPE

Dia= 219.075 mm. Wall= 6.350 mm. Insul= .000 mm. Cor= 3.2000 mm.

GENERAL

P1= 10.0002 KPa PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 3280 To 3290 DX= 502.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 1,734.81 N.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

---

From 3290 To 3300 DX= 305.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

```
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3299
 ---------------------------------------------------------------------------
 From  3300  To  3310 DZ= -850.000 mm.
 GENERAL
    PHyd= 686.0156 KPa   Mat= (177)A333 6   E= 203,395,456 KPa
    EH1= 198,817,856 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa
    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa
    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa
    v = .292   Density= .0078 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3309
 ---------------------------------------------------------------------------
 From  3310  To  3320  DX= -744.000 mm.  DY= -744.000 mm.
 GENERAL
    PHyd= 686.0156 KPa   Mat= (177)A333 6   E= 203,395,456 KPa
    EH1= 198,817,856 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa
    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa
    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa
    v = .292   Density= .0078 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 DISPLACEMENTS
    Node  3320   DX1= 80.898 mm.   DY1= .000 mm.   DZ1= -4.528 mm.   RX1= -.000
    RY1= -.042   RZ1= .000
 SIF's & TEE's
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INPUT LISTING

```
   Node  3320   Unreinforced Tee
-------------------------------------------------------------------------------
From  2300  To  2310  DX= -1,800.000 mm.
PIPE
   Dia= 168.275 mm.   Wall= 7.112 mm.   Insul= .000 mm.   Cor= .0000 mm.
GENERAL
   P1=7001.1592 KPa   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
   E= 203,308,080 KPa   EH1= 198,752,016 KPa   EH2= 203,308,080 KPa
   EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
   EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
   EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
   Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
RESTRAINTS
   Node  2310  +Y
   Node  2310  Z   Gap= 2.000 mm.
SIF's & TEE's
   Node  2310   Welding Tee
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 415,009 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 245,006 KPa
-------------------------------------------------------------------------------
From  2310  To  2320 DY= 970.000 mm.
PIPE
   Dia= 88.900 mm.   Wall= 5.486 mm.   Insul= .000 mm.
GENERAL
```

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 2320 To 2500 DY= 528.000 mm.

PIPE

Dia= 88.900 mm. Wall= 5.486 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 687.03 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

INPUT LISTING

From 2500 To 2504 DY= 322.000 mm.

PIPE

Dia= 88.900 mm. Wall= 5.486 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 2504 To 2508 DY= 270.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 383.02 N.

From 2508 To 2510 DX= 260.000 mm.

PIPE

Dia= 114.300 mm. Wall= 6.020 mm. Insul= .000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 383.02 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 2510 To 2520 DX= 152.000 mm.

PIPE

Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

INPUT LISTING

REDUCER

Diam2= 219.075 mm. Wall2= 6.350 mm. Angle= 19.02

From 2520 To 2540 DX= 181.000 mm.

PIPE

Dia= 219.075 mm. Wall= 6.350 mm. Insul= .000 mm. Cor= 3.2000 mm.

GENERAL

P1= 9.8062 KPa PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 2540 To 2545 DX= 502.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

```
 RIGID  Weight= 1,734.81 N.

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 From  2545  To  2550  DX= 305.000 mm.

 GENERAL

    PHyd= 686.0156 KPa   Mat= (177)A333 6   E= 203,395,456 KPa

    EH1= 198,817,856 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa

    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa

    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa

    v = .292   Density= .0078 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2551

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 From  2550  To  2555 DZ= -850.000 mm.

 GENERAL

    PHyd= 686.0156 KPa   Mat= (177)A333 6   E= 203,395,456 KPa

    EH1= 198,817,856 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa

    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa

    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa

    v = .292   Density= .0078 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 BEND at "TO" end

    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 2549

    Angle/Node @2= .00 2548

 ALLOWABLE STRESSES

    B31.3 (2006)       Sc= 137,895 KPa   Sh1= 137,895 KPa   Sh2= 137,895 KPa
```

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 2555 To 2560 DX= -753.000 mm. DY= -753.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 198,817,856 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

DISPLACEMENTS

Node 2560 DX1= 78.034 mm. DY1= .000 mm. DZ1= -5.915 mm. RX1= -.000

RY1= -.046 RZ1= .000

SIF's & TEE's

Node 2560 Unreinforced Tee

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 2560 To 6120 DX= 712.000 mm.

PIPE

Dia= 406.400 mm. Wall= 7.925 mm. Insul= .000 mm.

GENERAL

T1= 154 C PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 3120 To 3320 DX= -1,809.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 3320 To 6120 DX= -1,097.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 6120 +Y

From 3120 To 5260 DX= 886.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 5260 To 6100 DX= 1,208.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 6100 +Y

From 6100 To 6110 DX= 7,500.000 mm.

GENERAL

INPUT LISTING

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 6110 +Y

Node 6110 Z Gap= 2.000 mm.

From 5620 To 6130 DX= -3,642.000 mm.

PIPE

Dia= 406.400 mm. Wall= 7.925 mm. Insul= .000 mm.

GENERAL

T1= 154 C PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 194,615,536 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 6130 +Y

Node 6130 Z Gap= 10.000 mm.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 2225 To 2240 DX= 1,514.000 mm.

PIPE

Dia= 168.275 mm. Wall= 7.112 mm. Insul= .000 mm. Cor= .0000 mm.

GENERAL

T1= 90 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 2240 +Y

Node 2240 Z Gap= 2.000 mm.

SIF's & TEE's

Node 2240 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 2240 To 3000 DY= 970.000 mm.

PIPE

Dia= 88.900 mm. Wall= 5.486 mm. Insul= .000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3000 To 3010 DY= 528.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 687.03 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3010 To 3020 DY= 322.000 mm.

INPUT LISTING

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3020 To 3040 DY= 270.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 383.02 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

INPUT LISTING

From 3040 To 3050 DX= 260.000 mm.

PIPE

Dia= 114.300 mm. Wall= 6.020 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 383.02 N.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 3050 To 3060 DX= 152.000 mm.

PIPE

Dia= 114.300 mm. Wall= 6.020 mm. Insul= .000 mm. Cor= 3.2000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 198,752,016 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

REDUCER

Diam2= 219.075 mm. Wall2= 6.350 mm. Angle= 19.02

From 3060 To 3080 DX= 181.000 mm.

PIPE

Dia= 219.075 mm. Wall= 6.350 mm. Insul= .000 mm. Cor= 3.2000 mm.

GENERAL

T1= 70 C P1= 10.0002 KPa PHyd= 686.0156 KPa Mat= (177)A333 6

E= 203,395,456 KPa EH1= 200,306,992 KPa EH2= 203,395,456 KPa

EH3= 203,395,456 KPa EH4= 203,395,456 KPa EH5= 203,395,456 KPa

EH6= 203,395,456 KPa EH7= 203,395,456 KPa EH8= 203,395,456 KPa

EH9= 203,395,456 KPa v = .292 Density= .0078 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 3080 To 3090 DX= 502.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 200,306,992 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 1,734.81 N.

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

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From 3090 To 3100 DX= 305.000 mm.

GENERAL

PHyd= 686.0156 KPa Mat= (177)A333 6 E= 203,395,456 KPa

EH1= 200,306,992 KPa EH2= 203,395,456 KPa EH3= 203,395,456 KPa

EH4= 203,395,456 KPa EH5= 203,395,456 KPa EH6= 203,395,456 KPa

EH7= 203,395,456 KPa EH8= 203,395,456 KPa EH9= 203,395,456 KPa

v = .292 Density= .0078 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 304.800 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 3099

ALLOWABLE STRESSES

B31.3 (2006) Sc= 137,895 KPa Sh1= 137,895 KPa Sh2= 137,895 KPa

Sh3= 137,895 KPa Sh4= 137,895 KPa Sh5= 137,895 KPa Sh6= 137,895 KPa

Sh7= 137,895 KPa Sh8= 137,895 KPa Sh9= 137,895 KPa Sy= 241,316 KPa

---

From 3100 To 3110 DZ= -850.000 mm.

INPUT LISTING

```
 PIPE
    Dia= 219.075 mm.   Wall= 6.350 mm.   Insul= .000 mm.
 GENERAL
    PHyd= 686.0156 KPa   Mat= (177)A333 6   E= 203,395,456 KPa
    EH1= 200,306,992 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa
    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa
    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa
    v = .292   Density= .0078 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 304.800 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 3109
    Angle/Node @2= .00 3108
 ------------------------------------------------------------------------------
 From  3110  To  3120  DX= -735.000 mm.  DY= -735.000 mm.
 GENERAL
    PHyd= 686.0156 KPa   Mat= (177)A333 6   E= 203,395,456 KPa
    EH1= 200,306,992 KPa   EH2= 203,395,456 KPa   EH3= 203,395,456 KPa
    EH4= 203,395,456 KPa   EH5= 203,395,456 KPa   EH6= 203,395,456 KPa
    EH7= 203,395,456 KPa   EH8= 203,395,456 KPa   EH9= 203,395,456 KPa
    v = .292   Density= .0078 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 DISPLACEMENTS
    Node  3120   DX1= 83.762 mm.   DY1= .000 mm.   DZ1= -3.256 mm.   RX1= -.000
    RY1= -.039   RZ1= .000
 SIF's & TEE's
    Node  3120   Unreinforced Tee
```

INPUT LISTING

From 2240 To 5000 DX= 510.000 mm.

PIPE

Dia= 168.275 mm. Wall= 7.112 mm. Insul= .000 mm. Cor= .0000 mm.

GENERAL

T1= 90 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 198,752,016 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

From 85 To 90 DZ= 1,701.000 mm.

PIPE

Dia= 762.000 mm. Wall= 14.300 mm. Insul= .000 mm. Cor= .0000 mm.

GENERAL

T1= 49 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 201,443,072 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

INPUT LISTING

```
 BEND at "TO" end

    Radius= 1,143.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00 89

 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

 ---------------------------------------------------------------------------

 From  90  To  100 DY= -1,143.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

 ---------------------------------------------------------------------------

 From  100  To  101  DX= .000 mm.  DY= -1,750.000 mm.  DZ= .000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
```

INPUT LISTING

```
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  100  Y2   K= 711 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,414 N.
    Node  100  X2   K= 13,480 N./cm.   Yield K= 1 N./cm.
    Yield Force= 45,737 N.
    Node  100  Z2   K= 13,480 N./cm.   Yield K= 1 N./cm.
    Yield Force= 45,737 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  101  To  102  DX= .000 mm.  DY= -473.446 mm.  DZ= .000 mm.
 BEND at "TO" end
    Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000
 RESTRAINTS
    Node  101  Y2   K= 1,076 N./cm.   Yield K= 1 N./cm.   Yield Force= 3,652 N.
    Node  101  X2   K= 20,395 N./cm.   Yield K= 1 N./cm.
    Yield Force= 69,199 N.
    Node  101  Z2   K= 20,395 N./cm.   Yield K= 1 N./cm.
    Yield Force= 69,199 N.
 ---------------------------------------------------------------------------
 From  102  To  9100  DX= .000 mm.  DY= -669.554 mm.  DZ= 669.554 mm.
 BEND at "TO" end
    Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000
```

INPUT LISTING

```
 RESTRAINTS
    Node  102  X2   K= 730 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,476 N.
    Dir Vec= .0000  -.7071  .7071
    Node  102  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.
    Node  102  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.   Dir Vec= .0000  .7071  .7071
 ---------------------------------------------------------------------------
 From  9100  To  9101  DX= .000 mm.  DY= .000 mm.  DZ= 5,133.700 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  9100  Z2   K= 2,259 N./cm.   Yield K= 1 N./cm.   Yield Force= 7,665 N.
    Node  9100  X2   K= 42,811 N./cm.   Yield K= 1 N./cm.
    Yield Force= 145,259 N.
    Node  9100  Y2   K= 42,811 N./cm.   Yield K= 1 N./cm.
    Yield Force= 145,259 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
```

INPUT LISTING

From 9101 To 11000 DX= .000 mm. DY= .000 mm. DZ= 6,296.746 mm.

RESTRAINTS

Node 9101 Z2 K= 4,454 N./cm. Yield K= 1 N./cm.

Yield Force= 15,111 N.

Node 9101 X2 K= 84,398 N./cm. Yield K= 1 N./cm.

Yield Force= 286,364 N.

Node 9101 Y2 K= 84,398 N./cm. Yield K= 1 N./cm.

Yield Force= 286,364 N.

From 11000 To 11010 DX= .000 mm. DY= .000 mm. DZ= 12,100.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11000 Z2 K= 7,478 N./cm. Yield K= 1 N./cm.

Yield Force= 25,372 N.

Node 11000 X2 K= 141,704 N./cm. Yield K= 1 N./cm.

Yield Force= 480,803 N.

Node 11000 Y2 K= 141,704 N./cm. Yield K= 1 N./cm.

Yield Force= 480,803 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 11010 To 11020 DX= .000 mm. DY= .000 mm. DZ= 12,100.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11010 Z2 K= 9,837 N./cm. Yield K= 1 N./cm.

Yield Force= 33,376 N.

Node 11010 X2 K= 186,405 N./cm. Yield K= 1 N./cm.

Yield Force= 632,473 N.

Node 11010 Y2 K= 186,405 N./cm. Yield K= 1 N./cm.

Yield Force= 632,473 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 11020 To 11030 DX= .000 mm. DY= .000 mm. DZ= 12,100.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11020 Z2 K= 9,837 N./cm. Yield K= 1 N./cm.

Yield Force= 33,376 N.

Node 11020 X2 K= 186,405 N./cm. Yield K= 1 N./cm.

Yield Force= 632,473 N.

Node 11020 Y2 K= 186,405 N./cm. Yield K= 1 N./cm.

Yield Force= 632,473 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 11030 To 11040 DX= .000 mm. DY= .000 mm. DZ= 12,100.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

RESTRAINTS

Node 11030 Z2 K= 9,837 N./cm. Yield K= 1 N./cm.

Yield Force= 33,376 N.

Node 11030 X2 K= 186,405 N./cm. Yield K= 1 N./cm.

Yield Force= 632,473 N.

Node 11030 Y2 K= 186,405 N./cm. Yield K= 1 N./cm.

Yield Force= 632,473 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 11040 To 11041 DX= .000 mm. DY= .000 mm. DZ= 1,356.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11040 Z2 K= 5,469 N./cm. Yield K= 1 N./cm.

Yield Force= 18,558 N.

Node 11040 X2 K= 103,647 N./cm. Yield K= 1 N./cm.

Yield Force= 351,676 N.

Node 11040 Y2 K= 103,647 N./cm. Yield K= 1 N./cm.

```
   Yield Force= 351,676 N.

ALLOWABLE STRESSES

   B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

-------------------------------------------------------------------------------

From 11041  To 11042  DX= .000 mm.  DY= .000 mm.  DZ= 473.446 mm.

BEND at "TO" end

   Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000

RESTRAINTS

   Node 11041  Z2   K= 916 N./cm.   Yield K= 1 N./cm.   Yield Force= 3,108 N.

   Node 11041  X2   K= 17,360 N./cm.   Yield K= 1 N./cm.

   Yield Force= 58,901 N.

   Node 11041  Y2   K= 17,360 N./cm.   Yield K= 1 N./cm.

   Yield Force= 58,901 N.

-------------------------------------------------------------------------------

From 11042  To  9110  DX= .000 mm.  DY= 669.554 mm.  DZ= 669.554 mm.

BEND at "TO" end

   Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000

RESTRAINTS

   Node 11042  X2   K= 730 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,476 N.

   Dir Vec= .0000  .7071  .7071

   Node 11042  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.

   Yield Force= 46,924 N.

   Node 11042  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.

   Yield Force= 46,924 N.   Dir Vec= .0000  .7071  -.7071
```

INPUT LISTING

From 9110 To 9119 DX= .000 mm. DY= 1,111.723 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9110 Y2 K= 1,076 N./cm. Yield K= 1 N./cm. Yield Force= 3,652 N.

Node 9110 X2 K= 20,395 N./cm. Yield K= 1 N./cm.

Yield Force= 69,199 N.

Node 9110 Z2 K= 20,395 N./cm. Yield K= 1 N./cm.

Yield Force= 69,199 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 9119 To 9120 DX= .000 mm. DY= 1,111.723 mm. DZ= .000 mm.

RESTRAINTS

Node 9120 Y2 K= 711 N./cm. Yield K= 1 N./cm. Yield Force= 2,414 N.

Node 9120 X2 K= 13,480 N./cm. Yield K= 1 N./cm.

Yield Force= 45,737 N.

Node 9120 Z2 K= 13,480 N./cm. Yield K= 1 N./cm.

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    Yield Force= 45,737 N.
 ---------------------------------------------------------------------------
 From  9120  To  9130 DY= 1,143.000 mm.
 GENERAL
    T1= 49 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
 BEND at "TO" end
    Radius= 1,143.000 mm. (LONG)   Bend Angle= 90.000   Angle/Node @1= 45.00
  9129
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa
 ---------------------------------------------------------------------------
 From  9130  To 10070 DZ= 1,143.000 mm.
 GENERAL
    T1= 49 C   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)
    E= 203,308,080 KPa   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa
    EH3= 203,308,080 KPa   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa
    EH6= 203,308,080 KPa   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa
    EH9= 203,308,080 KPa   v = .300   Density= .0080 kg./cu.cm.
    Insul= .0002 kg./cu.cm.   Fluid= .0000000 kg./cu.cm.
```

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 10070 To 10080 DZ= 1,300.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 10080 To 9140 DZ= 1,380.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 9140 To 9150 DZ= 859.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

INPUT LISTING

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9150 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 9150 To 9160 DZ= 1,118.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 9160 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

From 9160 To 9180 DX= -559.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 9180 To 9190 DX= -610.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

INPUT LISTING

REDUCER

Diam2= 508.000 mm. Wall2= 12.700 mm. Angle= 11.80

From 9190 To 9200 DX= -762.000 mm.

PIPE

Dia= 508.000 mm. Wall= 12.700 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9199

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9200 To 9210 DZ= 762.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9210 To 9220 DZ= 397.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,200.62 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9220 To 9230 DZ= 2,125.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9230 To 9240 DZ= 1,594.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=33,257.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9240 To 9250 DZ= 1,250.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9250 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9250 To 9280 DZ= 856.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 9280 To 9290 DZ= 397.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

```
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RIGID  Weight= 6,200.62 N.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 520,012 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 415,009 KPa
 ---------------------------------------------------------------------------
 From  9290  To  9300 DZ= 5,574.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 RESTRAINTS
    Node  9300  +Y
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 520,012 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 415,009 KPa
 ---------------------------------------------------------------------------
 From  9300  To  9310 DZ= 5,574.000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
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EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 9310 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 9310 To 9320 DZ= 397.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,200.62 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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INPUT LISTING

From 9320 To 9330 DZ= 2,303.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 9330 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 9330 To 9340 DX= 912.000 mm.

PIPE

Dia= 508.000 mm. Wall= 12.700 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

INPUT LISTING

Node 9340 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9340 To 9345 DX= 679.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 9340 To 9350 DZ= -381.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9350 To 9360 DZ= -1,661.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=33,257.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9360 To 9370 DZ= -6,836.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9370 +Y

INPUT LISTING

Node 9370 X Gap= 2.000 mm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9370 To 9380 DZ= -8,000.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9379

Angle/Node @2= .00 9378

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9380 To 9390 DX= 2,950.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 9390 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 9330 To 9335 DZ= 600.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9335 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

INPUT LISTING

From 9335 To 9500 DZ= 181.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 9500 To 9510 DZ= 1,728.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=41,086.35 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 9510 To 9520 DZ= 762.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9519

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

---

From 9520 To 9530 DX= 762.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9530 To 9550 DX= 610.000 mm.

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

INPUT LISTING

```
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 ALLOWABLE STRESSES
    B31.8 (2003)       Sc= 520,012 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 415,009 KPa
 REDUCER
    Diam2= 762.000 mm.   Wall2= 14.300 mm.   Angle= 11.80
 ------------------------------------------------------------------------------
 From  9550  To  9560  DX= 559.000 mm.
 PIPE
    Dia= 762.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
 SIF's & TEE's
    Node  9560   Welding Tee
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INPUT LISTING

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 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

 ---------------------------------------------------------------------------

 From  9560  To  9900 DZ= 1,118.000 mm.

 GENERAL

    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa

    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa

    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa

    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa

    v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.

    Fluid= .0000000 kg./cu.cm.

 RESTRAINTS

    Node  9900  +Y

 SIF's & TEE's

    Node  9900   Welding Tee

 ALLOWABLE STRESSES

    B31.8 (2003)       Sc= 570,013 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa

    Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa

    Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 485,011 KPa

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 From  9900  To 10000  DX= -654.000 mm.

 PIPE

    Dia= 355.600 mm.   Wall= 14.300 mm.   Insul= .000 mm.

 GENERAL
```

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 9900 To 9910 DZ= 1,239.000 mm.

PIPE

Dia= 762.000 mm. Wall= 14.300 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 9910 To 9920 DZ= 1,300.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 9920 To 9950 DZ= 1,143.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 1,143.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00

9951

From 9950 To 9960 DY= -1,143.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

INPUT LISTING

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 9960 To 9961 DX= .000 mm. DY= -1,000.000 mm. DZ= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9960 Y2 K= 406 N./cm. Yield K= 1 N./cm. Yield Force= 1,379 N.

Node 9960 X2 K= 7,703 N./cm. Yield K= 1 N./cm.

Yield Force= 26,135 N.

Node 9960 Z2 K= 7,703 N./cm. Yield K= 1 N./cm.

Yield Force= 26,135 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

---

From 9961 To 9962 DX= .000 mm. DY= -473.446 mm. DZ= .000 mm.

BEND at "TO" end

Radius= 1,143.000 mm. (LONG) Bend Angle= 45.000

INPUT LISTING

```
 RESTRAINTS
    Node  9961  Y2   K= 771 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,617 N.
    Node  9961  X2   K= 14,617 N./cm.   Yield K= 1 N./cm.
    Yield Force= 49,597 N.
    Node  9961  Z2   K= 14,617 N./cm.   Yield K= 1 N./cm.
    Yield Force= 49,597 N.
 ------------------------------------------------------------------------
 From  9962  To 10010  DX= .000 mm.  DY= -669.554 mm.  DZ= 669.554 mm.
 BEND at "TO" end
    Radius= 1,143.000 mm. (LONG)   Bend Angle= 45.000
 RESTRAINTS
    Node  9962  X2   K= 730 N./cm.   Yield K= 1 N./cm.   Yield Force= 2,476 N.
    Dir Vec= .0000  -.7071  .7071
    Node  9962  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.
    Node  9962  X2   K= 13,830 N./cm.   Yield K= 1 N./cm.
    Yield Force= 46,924 N.   Dir Vec= .0000  .7071  .7071
 ------------------------------------------------------------------------
 From 10010  To 10011  DX= .000 mm.  DY= .000 mm.  DZ= 5,133.700 mm.
 GENERAL
    PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
    EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
    EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
    EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
    v = .300   Density= .0000 kg./cu.cm.   Insul= .0000 kg./cu.cm.
    Fluid= .0000000 kg./cu.cm.
```

INPUT LISTING

RESTRAINTS

Node 10010 Z2 K= 2,259 N./cm. Yield K= 1 N./cm. Yield Force= 7,665 N.

Node 10010 X2 K= 42,811 N./cm. Yield K= 1 N./cm.

Yield Force= 145,259 N.

Node 10010 Y2 K= 42,811 N./cm. Yield K= 1 N./cm.

Yield Force= 145,259 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 10011 To 10012 DX= .000 mm. DY= .000 mm. DZ= 3,298.873 mm.

RESTRAINTS

Node 10011 Z2 K= 3,235 N./cm. Yield K= 1 N./cm.

Yield Force= 10,977 N.

Node 10011 X2 K= 61,307 N./cm. Yield K= 1 N./cm.

Yield Force= 208,014 N.

Node 10011 Y2 K= 61,307 N./cm. Yield K= 1 N./cm.

Yield Force= 208,014 N.

From 10012 To 11100 DX= .000 mm. DY= .000 mm. DZ= 3,298.873 mm.

RESTRAINTS

Node 10012 Z2 K= 2,682 N./cm. Yield K= 1 N./cm. Yield Force= 9,099 N.

Node 10012 X2 K= 50,820 N./cm. Yield K= 1 N./cm.

Yield Force= 172,434 N.

Node 10012 Y2 K= 50,820 N./cm. Yield K= 1 N./cm.

Yield Force= 172,434 N.

From 11100 To 11110 DX= .000 mm. DY= .000 mm. DZ= 12,401.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11100 Z2 K= 6,382 N./cm. Yield K= 1 N./cm.

Yield Force= 21,653 N.

Node 11100 X2 K= 120,931 N./cm. Yield K= 1 N./cm.

Yield Force= 410,320 N.

Node 11100 Y2 K= 120,931 N./cm. Yield K= 1 N./cm.

Yield Force= 410,320 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 11110 To 10020 DX= .000 mm. DY= .000 mm. DZ= 150.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 11110 Z2 K= 5,102 N./cm. Yield K= 1 N./cm.

Yield Force= 17,310 N.

Node 11110 X2 K= 96,677 N./cm. Yield K= 1 N./cm.

Yield Force= 328,023 N.

Node 11110 Y2 K= 96,677 N./cm. Yield K= 1 N./cm.

Yield Force= 328,023 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 10020 To 10029 DX= .000 mm. DY= .000 mm. DZ= 249.500 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0000 kg./cu.cm. Insul= .0000 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= .01 N.

RESTRAINTS

Node 10020 Z2 K= 264 N./cm. Yield K= 1 N./cm. Yield Force= 895 N.

Node 10020 X2 K= 4,999 N./cm. Yield K= 1 N./cm.

Yield Force= 16,962 N.

Node 10020 Y2 K= 4,999 N./cm. Yield K= 1 N./cm.

Yield Force= 16,962 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 10029 To 10030 DX= .000 mm. DY= .000 mm. DZ= 249.500 mm.

RESTRAINTS

Node 10030 Z2 K= 203 N./cm. Yield K= 1 N./cm. Yield Force= 688 N.

Node 10030 X2 K= 3,844 N./cm. Yield K= 1 N./cm.

Yield Force= 13,041 N.

Node 10030 Y2 K= 3,844 N./cm. Yield K= 1 N./cm.

Yield Force= 13,041 N.

From 9560 To 9580 DX= 559.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

INPUT LISTING

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 9580 To 9590 DX= 610.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

REDUCER

Diam2= 508.000 mm. Wall2= 12.700 mm. Angle= 11.80

From 9590 To 9600 DX= 762.000 mm.

PIPE

Dia= 508.000 mm. Wall= 12.700 mm. Insul= .000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9599

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9600 To 9610 DZ= -762.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9610 To 9620 DZ= -1,594.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=41,086.35 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9620 To 9622 DZ= -200.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9622 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

INPUT LISTING

From 9622 To 9624 DZ= -200.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

From 9624 To 9627 DZ= -464.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,200.31 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9627 To 9630 DZ= -2,684.000 mm.

GENERAL

INPUT LISTING

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9630 To 9640 DZ= -397.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,200.62 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9640 To 9650 DZ= -400.000 mm.

INPUT LISTING

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9650 To 9660 DZ= -4,844.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9660 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

INPUT LISTING

From 9660 To 9670 DZ= -5,904.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9670 To 9680 DZ= -397.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,200.62 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9680 To 9690 DZ= -1,703.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RESTRAINTS

Node 9690 +Y

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9690 To 9390 DZ= -600.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

INPUT LISTING

Node 9390 Welding Tee

From 9390 To 9710 DZ= -381.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9710 To 9720 DZ= -1,594.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight=33,257.66 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9720 To 9730 DZ= -1,212.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9730 To 9800 DZ= -402.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

RIGID Weight= 6,200.62 N.

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9800 To 9810 DZ= -762.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

BEND at "TO" end

Radius= 762.000 mm. (LONG) Bend Angle= 90.000 Angle/Node @1= 45.00 9809

ALLOWABLE STRESSES

B31.8 (2003) Sc= 520,012 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 415,009 KPa

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From 9810 To 9820 DX= -762.000 mm.

GENERAL

PHyd=********* KPa Mat= (446)PSL2 L485(X70) E= 203,308,080 KPa

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

INPUT LISTING

```
   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 520,012 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 415,009 KPa
---------------------------------------------------------------------------
From  9820  To  9840  DX= -610.000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
   EH1= 201,443,072 KPa   EH2= 203,308,080 KPa   EH3= 203,308,080 KPa
   EH4= 203,308,080 KPa   EH5= 203,308,080 KPa   EH6= 203,308,080 KPa
   EH7= 203,308,080 KPa   EH8= 203,308,080 KPa   EH9= 203,308,080 KPa
   v = .300   Density= .0080 kg./cu.cm.   Insul= .0002 kg./cu.cm.
   Fluid= .0000000 kg./cu.cm.
ALLOWABLE STRESSES
   B31.8 (2003)       Sc= 520,012 KPa   Sh1= 485,000 KPa   Sh2= 485,000 KPa
   Sh3= 485,000 KPa   Sh4= 485,000 KPa   Sh5= 485,000 KPa   Sh6= 485,000 KPa
   Sh7= 485,000 KPa   Sh8= 485,000 KPa   Sh9= 485,000 KPa   Sy= 415,009 KPa
REDUCER
   Diam2= 762.000 mm.   Wall2= 14.300 mm.   Angle= 11.80
---------------------------------------------------------------------------
From  9840  To  9160  DX= -559.000 mm.
PIPE
   Dia= 762.000 mm.   Wall= 14.300 mm.   Insul= .000 mm.
GENERAL
   PHyd=********* KPa   Mat= (446)PSL2 L485(X70)   E= 203,308,080 KPa
```

EH1= 201,443,072 KPa EH2= 203,308,080 KPa EH3= 203,308,080 KPa

EH4= 203,308,080 KPa EH5= 203,308,080 KPa EH6= 203,308,080 KPa

EH7= 203,308,080 KPa EH8= 203,308,080 KPa EH9= 203,308,080 KPa

v = .300 Density= .0080 kg./cu.cm. Insul= .0002 kg./cu.cm.

Fluid= .0000000 kg./cu.cm.

SIF's & TEE's

Node 9160 Welding Tee

ALLOWABLE STRESSES

B31.8 (2003) Sc= 570,013 KPa Sh1= 485,000 KPa Sh2= 485,000 KPa

Sh3= 485,000 KPa Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa

Sh7= 485,000 KPa Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,011 KPa

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From 2310 To 6000 DX= -143.000 mm.

PIPE

Dia= 168.275 mm. Wall= 7.112 mm. Insul= .000 mm.

GENERAL

T1= 70 C P1=7001.1592 KPa PHyd=********* KPa Mat= (446)PSL2 L485(X70)

E= 203,308,080 KPa EH1= 200,044,144 KPa EH2= 203,308,080 KPa

EH3= 203,308,080 KPa EH4= 203,308,080 KPa EH5= 203,308,080 KPa

EH6= 203,308,080 KPa EH7= 203,308,080 KPa EH8= 203,308,080 KPa

EH9= 203,308,080 KPa v = .300 Density= .0080 kg./cu.cm.

Insul= .0002 kg./cu.cm. Fluid= .0000000 kg./cu.cm.

ALLOWABLE STRESSES

B31.8 (2003) Sh1= 485,000 KPa Sh2= 485,000 KPa Sh3= 485,000 KPa

Sh4= 485,000 KPa Sh5= 485,000 KPa Sh6= 485,000 KPa Sh7= 485,000 KPa

Sh8= 485,000 KPa Sh9= 485,000 KPa Sy= 485,000 KPa

INPUT LISTING

Cambios de Material:

10210	10200	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10200	10190	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10190	10180	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10180	10170	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10170	10160	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10160	10150	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10150	10140	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
10140	10135	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10135	10130	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10130	10300	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10130	10260	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10260	10250	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10250	10120	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10120	10121	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
10110	10111	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11200	11210	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11210	11211	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
10100	9	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
10	20	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
20	30	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
30	120	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
120	125	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
125	149	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
150	220	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.

INPUT LISTING

220	229	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
230	231	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
232	1600	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1600	8300	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8300	8310	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8310	8320	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8320	1610	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1610	1650	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
230	240	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0000 kg./cu.cm.
240	249	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
250	252	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
253	1700	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1700	8200	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8200	8210	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8210	8220	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8220	1710	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1710	1750	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
250	260	Mat= (446)PSL2 L485(X70)

		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
260	269	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
270	272	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
273	1800	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1800	8100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8100	8110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8110	8120	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8120	1810	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1810	1850	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

270	289	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
290	292	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
293	2100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2100	8000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8000	8010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8010	8020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8020	2110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2110	2150	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
290	299	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0000 kg./cu.cm.
150	160	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
160	179	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
180	182	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
183	1500	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1500	8400	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8400	8410	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8410	8420	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
8420	1510	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1510	1550	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
180	189	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
30	35	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
35	40	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
40	50	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
50	60	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
60	70	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
70	75	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
75	80	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

80	5495	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5495	5500	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5500	5510	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5510	5520	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5520	5530	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5530	5540	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5540	5550	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5550	5560	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5560	5570	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
5570	5580	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5580	5590	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
5590	5595	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
5595	5600	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
5600	5605	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
5605	5610	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
5610	5620	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
5620	2560	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
350	400	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
400	410	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
420	1294	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
1295	1300	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1300	1330	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1330	1340	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1340	1350	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1350	1355	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1355	1360	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
410	420	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
420	429	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.

INPUT LISTING

440	1989	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
1990	2000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2000	2030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2030	2040	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2040	2050	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2050	2060	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2060	1950	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
430	440	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
440	449	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0000 kg./cu.cm.
18000	1044	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
1045	1050	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1050	1080	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1080	1090	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1090	1100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1100	1105	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1105	1110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
450	18000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
18000	460	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
460	16000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
16000	469	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
16000	489	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
490	510	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
510	540	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
540	550	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
550	560	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
560	565	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

565	570	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
570	620	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
620	630	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
630	635	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
635	14030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
14030	14025	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
14025	14020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
14020	14015	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
14015	14010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
14010	707	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
680	750	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
750	17000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
17000	754	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
17000	4229	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
4230	17010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
17010	17020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
17020	17025	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
17025	17030	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
17030	1225	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1225	1230	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1230	1240	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1240	1110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1110	1250	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1250	17100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
17100	17110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
17110	1260	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

1260	1270	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
755	760	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
760	19000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
19000	769	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
19000	4299	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
4300	19010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
19010	19020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
19020	19025	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
19025	19030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
19030	1925	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1925	1930	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1930	1940	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1940	1950	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1950	1960	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1960	19100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
19100	19110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
19110	1970	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1970	1980	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
770	780	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
780	13000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
13000	789	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
13000	4399	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
4400	13010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
13010	13020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
13020	13025	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
13025	13030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

13030	1425	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1425	1430	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1430	1440	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1440	1360	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1360	1450	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1450	15100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
15100	15110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
15110	1460	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1460	1470	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
790	800	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
800	810	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
810	820	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
820	12000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
12000	829	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
12000	831	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
832	12010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
12010	12015	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
12015	12017	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
12017	12020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
12020	12025	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
12025	12030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
12030	885	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
885	890	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
890	900	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
900	910	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
910	920	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

920	15010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
15010	15020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
15020	930	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
930	940	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
680	14000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
14000	690	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
690	691	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
700	704	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
705	740	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

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INPUT LISTING

		Densidad= .0080 kg./cu.cm.
740	745	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
745	707	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
707	710	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
710	720	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
720	730	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
730	4000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4000	4100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4100	4110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4110	4120	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4120	4130	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4130	4140	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4140	7200	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7200	7210	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7210	7220	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7220	7230	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7230	7240	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7240	7600	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

7600	7610	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7610	7615	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7615	7620	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7620	7650	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7650	7660	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7660	7670	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7670	7680	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7680	7690	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7690	7700	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

		Densidad= .0080 kg./cu.cm.
7700	7710	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7710	7720	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7720	7730	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7730	7740	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7740	7750	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7750	7760	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7760	7770	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7770	7780	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7780	7790	Mat= (446)PSL2 L485(X70)

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7790	7800	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7800	7810	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7810	7820	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7820	7830	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7830	7840	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7840	7850	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7850	7860	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7860	7870	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

7870	7880	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7880	7890	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7240	7250	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7250	7260	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7260	7270	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7270	7280	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7280	7290	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7290	7295	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7295	7300	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
7300	7320	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7320	7330	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7330	7340	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7340	7350	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7350	7370	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7370	7373	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7373	7376	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7376	7380	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7380	7400	Mat= (446)PSL2 L485(X70)

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7400	7410	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7410	7415	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7415	7420	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7420	7430	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7430	7440	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7440	7445	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7445	7450	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7450	7460	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

7460	7480	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7480	7482	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7482	7485	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7485	7490	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7490	7500	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4140	4150	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4000	4005	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4005	4010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4010	4020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
4020	4030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4030	4040	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4040	4050	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
4050	7000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7000	7010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7010	7030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7030	7040	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7040	7050	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7050	7060	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7060	7070	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7070	7080	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7080	7090	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7090	7100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
7100	7110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
570	580	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
580	16010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
16010	16020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

16020	590	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
590	600	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
350	15000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
15000	379	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
15000	382	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
383	1010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
1010	980	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
980	970	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
970	960	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

		Densidad= .0080 kg./cu.cm.
960	965	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
965	910	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
80	81	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
81	83	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
83	2200	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2200	2205	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2205	2210	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2210	2215	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2215	2220	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2220	2225	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
83	105	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
105	110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
110	85	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
85	360	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
360	340	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
340	346	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
346	349	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.

INPUT LISTING

2225	2300	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2300	3200	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3200	3210	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3210	3220	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3220	3240	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3240	3250	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3250	3260	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3260	3280	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3280	3290	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3290	3300	Mat= (177)A333 6 E= 203,395,456 KPa

		v = .292 Densidad= .0078 kg./cu.cm.
3300	3310	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3310	3320	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2300	2310	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2310	2320	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2320	2500	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2500	2504	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2504	2508	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2508	2510	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2510	2520	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

2520	2540	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2540	2545	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2545	2550	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2550	2555	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2555	2560	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2560	6120	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3120	3320	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3320	6120	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3120	5260	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
5260	6100	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
6100	6110	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
5620	6130	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2225	2240	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

		Densidad= .0080 kg./cu.cm.
2240	3000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3000	3010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3010	3020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3020	3040	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3040	3050	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3050	3060	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
3060	3080	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3080	3090	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3090	3100	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
3100	3110	Mat= (177)A333 6 E= 203,395,456 KPa

INPUT LISTING

		v = .292 Densidad= .0078 kg./cu.cm.
3110	3120	Mat= (177)A333 6 E= 203,395,456 KPa
		v = .292 Densidad= .0078 kg./cu.cm.
2240	5000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
85	90	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
90	100	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
100	101	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
9100	9101	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11000	11010	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11010	11020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11020	11030	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0000 kg./cu.cm.
11030	11040	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11040	11041	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
9110	9119	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
9120	9130	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9130	10070	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10070	10080	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
10080	9140	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9140	9150	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9150	9160	Mat= (446)PSL2 L485(X70)

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9160	9180	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9180	9190	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9190	9200	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9200	9210	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9210	9220	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9220	9230	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9230	9240	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9240	9250	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

9250	9280	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9280	9290	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9290	9300	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9300	9310	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9310	9320	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9320	9330	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9330	9340	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9340	9345	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9340	9350	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
9350	9360	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9360	9370	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9370	9380	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9380	9390	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9330	9335	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9335	9500	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9500	9510	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9510	9520	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9520	9530	Mat= (446)PSL2 L485(X70)

INPUT LISTING

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9530	9550	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9550	9560	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9560	9900	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9900	10000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9900	9910	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9910	9920	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9920	9950	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9950	9960	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

9960	9961	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
10010	10011	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11100	11110	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
11110	10020	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
10020	10029	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0000 kg./cu.cm.
9560	9580	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9580	9590	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9590	9600	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9600	9610	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300

INPUT LISTING

		Densidad= .0080 kg./cu.cm.
9610	9620	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9620	9622	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9622	9624	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9624	9627	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9627	9630	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9630	9640	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9640	9650	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9650	9660	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9660	9670	Mat= (446)PSL2 L485(X70)

		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9670	9680	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9680	9690	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9690	9390	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9390	9710	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9710	9720	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9720	9730	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9730	9800	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9800	9810	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

INPUT LISTING

9810	9820	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9820	9840	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
9840	9160	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.
2310	6000	Mat= (446)PSL2 L485(X70)
		E= 203,308,080 KPa v = .300
		Densidad= .0080 kg./cu.cm.

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CAMBIO DE ESFUERZOS ADMISIBLES

10210	10200	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10180	10170	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10160	10150	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10140	10135	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10135	10130	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10130	10300	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

10130	10260	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10120	10121	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10110	10111	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11200	11210	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10100	9	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
20	30	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
30	120	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
120	125	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
150	220	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
220	229	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
230	231	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1600	8300	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8300	8310	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

8310	8320	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8320	1610	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1610	1650	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
230	240	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
240	249	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
250	252	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1700	8200	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8200	8210	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8210	8220	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa

INPUT LISTING

		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8220	1710	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1710	1750	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
250	260	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
260	269	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa

INPUT LISTING

270	272	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1800	8100	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8100	8110	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8110	8120	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8120	1810	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa

INPUT LISTING

		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1810	1850	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
270	289	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
290	292	B31.8 (2003)	Sc= 415,009 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 245,006 KPa
2100	8000	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa

INPUT LISTING

		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8000	8010	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8010	8020	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8020	2110	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2110	2150	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

290	299	B31.8 (2003)	Sc= 415,009 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 245,006 KPa
150	160	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
160	179	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
180	182	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
8420	1510	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa

INPUT LISTING

		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1510	1550	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
180	189	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
30	35	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
40	50	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
50	60	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
60	70	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
70	75	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
80	5495	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

5495	5500	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5500	5510	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5520	5530	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5530	5540	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5540	5550	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa

		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5550	5560	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5560	5570	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5570	5580	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5580	5590	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa

		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
5590	5595	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
5595	5600	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
5600	5605	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
5610	5620	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa

INPUT LISTING

5620	2560	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
350	400	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
400	410	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
420	1294	B31.8 (2003)	Sc= 415,009 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 245,006 KPa
1295	1300	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa

INPUT LISTING

		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1300	1330	B31.8 (2003)	Sc= 415,009 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 245,006 KPa
1330	1340	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1340	1350	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1350	1355	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
410	420	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
420	429	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
440	1989	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2000	2030	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

2030	2040	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
2040	2050	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
2050	2060	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
430	440	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
440	449	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa

INPUT LISTING

		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
18000	1044	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1050	1080	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1080	1090	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1090	1100	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1100	1105	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
450	18000	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
16000	489	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
490	510	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

510	540	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
540	550	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
550	560	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
560	565	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
570	620	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
620	630	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
630	635	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
635	14030	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
14030	14025	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
14020	14015	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
14010	707	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
680	750	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
750	17000	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

17000	4229	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4230	17010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
17010	17020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
17020	17025	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
17025	17030	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
17030	1225	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1225	1230	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1230	1240	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1240	1110	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1110	1250	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1250	17100	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
17100	17110	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
17110	1260	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

1260	1270	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
755	760	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
760	19000	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
19000	4299	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4300	19010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
19010	19020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
19020	19025	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
19025	19030	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
19030	1925	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1925	1930	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1930	1940	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1940	1950	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1950	1960	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

1960	19100	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
19100	19110	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
19110	1970	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1970	1980	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
770	780	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
780	13000	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
13000	4399	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4400	13010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
13010	13020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
13030	1425	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1425	1430	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1430	1440	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1440	1360	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

1360	1450	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1450	15100	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
15100	15110	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
15110	1460	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
1460	1470	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
790	800	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
800	810	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
810	820	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
820	12000	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
12000	831	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
832	12010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
12010	12015	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
12020	12025	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

12030	885	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
885	890	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
890	900	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
900	910	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
910	920	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
920	15010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
15010	15020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
15020	930	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
680	14000	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
690	691	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
700	704	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
705	740	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
740	745	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

710	720	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
720	730	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
730	4000	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4000	4100	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4100	4110	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4110	4120	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4120	4130	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4130	4140	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4140	7200	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7200	7210	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7210	7220	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7220	7230	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7230	7240	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

7240	7600	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7600	7610	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7610	7615	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7615	7620	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7620	7650	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7650	7660	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7660	7670	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7670	7680	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7680	7690	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7690	7700	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7700	7710	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7710	7720	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7720	7730	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

7730	7740	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7740	7750	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7750	7760	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7760	7770	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7770	7780	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7780	7790	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7790	7800	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7800	7810	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7810	7820	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7820	7830	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7830	7840	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7840	7850	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7850	7860	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

7860	7870	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7870	7880	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7880	7890	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,000 KPa
7240	7250	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7250	7260	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7260	7270	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7270	7280	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7280	7290	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7290	7295	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7295	7300	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7300	7320	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7320	7330	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7330	7340	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

7340	7350	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7350	7370	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7370	7373	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7373	7376	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7376	7380	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7380	7400	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7400	7410	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7410	7415	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7415	7420	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7420	7430	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7430	7440	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7440	7445	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7445	7450	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

7450	7460	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7460	7480	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7480	7482	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7482	7485	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7485	7490	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7490	7500	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4140	4150	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4000	4005	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4010	4020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4020	4030	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4030	4040	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4040	4050	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
4050	7000	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

7000	7010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7010	7030	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7030	7040	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7040	7050	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7050	7060	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7060	7070	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7070	7080	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7080	7090	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
7090	7100	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
570	580	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
580	16010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
16010	16020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
16020	590	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

590	600	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
350	15000	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
15000	382	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
1010	980	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
980	970	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa

INPUT LISTING

		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
970	960	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
80	81	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
83	2200	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2200	2205	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa

INPUT LISTING

		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2210	2215	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2215	2220	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
83	105	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
85	360	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

2225	2300	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2300	3200	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3200	3210	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3210	3220	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3220	3240	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa

		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3240	3250	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3260	3280	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
3280	3290	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
2300	2310	B31.8 (2003)	Sc= 415,009 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 245,006 KPa
2310	2320	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2320	2500	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2508	2510	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2510	2520	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

2520	2540	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
2550	2555	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
2555	2560	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
2560	6120	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
5620	6130	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa

		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
2225	2240	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
2240	3000	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3000	3010	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3010	3020	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa

		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3020	3040	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3040	3050	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3050	3060	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
3060	3080	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa

INPUT LISTING

3080	3090	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
3090	3100	B31.3 (2006)	Sc= 137,895 KPa
		Sh1= 137,895 KPa	Sh2= 137,895 KPa
		Sh3= 137,895 KPa	Sh4= 137,895 KPa
		Sh5= 137,895 KPa	Sh6= 137,895 KPa
		Sh7= 137,895 KPa	Sh8= 137,895 KPa
		Sh9= 137,895 KPa	Sy= 241,316 KPa
2240	5000	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	
85	90	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
90	100	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
100	101	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9100	9101	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11000	11010	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11010	11020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11020	11030	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11030	11040	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11040	11041	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9110	9119	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

9120	9130	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9130	10070	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9140	9150	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9150	9160	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9160	9180	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9180	9190	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9190	9200	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9200	9210	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9210	9220	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9220	9230	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9230	9240	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9240	9250	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9280	9290	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa

INPUT LISTING

9290	9300	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9300	9310	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9310	9320	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9320	9330	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9330	9340	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9340	9350	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9350	9360	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9360	9370	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9370	9380	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9380	9390	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9330	9335	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9500	9510	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9510	9520	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa

INPUT LISTING

9520	9530	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9530	9550	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9550	9560	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9560	9900	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9900	9910	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

INPUT LISTING

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9950	9960	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9960	9961	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10010	10011	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11100	11110	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
11110	10020	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
10020	10029	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9560	9580	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
9580	9590	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa

INPUT LISTING

9590	9600	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9600	9610	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9610	9620	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9620	9622	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9624	9627	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9627	9630	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9630	9640	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9640	9650	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9650	9660	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa

INPUT LISTING

		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9660	9670	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9670	9680	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9680	9690	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9390	9710	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa

INPUT LISTING

9710	9720	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9720	9730	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9730	9800	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9800	9810	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9810	9820	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa

		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9820	9840	B31.8 (2003)	Sc= 520,012 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 415,009 KPa
9840	9160	B31.8 (2003)	Sc= 570,013 KPa
		Sh1= 485,000 KPa	Sh2= 485,000 KPa
		Sh3= 485,000 KPa	Sh4= 485,000 KPa
		Sh5= 485,000 KPa	Sh6= 485,000 KPa
		Sh7= 485,000 KPa	Sh8= 485,000 KPa
		Sh9= 485,000 KPa	Sy= 485,011 KPa
2310	6000	B31.8 (2003)	Sh1= 485,000 KPa
		Sh2= 485,000 KPa	Sh3= 485,000 KPa
		Sh4= 485,000 KPa	Sh5= 485,000 KPa
		Sh6= 485,000 KPa	Sh7= 485,000 KPa
		Sh8= 485,000 KPa	Sh9= 485,000 KPa
		Sy= 485,000 KPa	

INPUT LISTING

CODO(ELEMENTOS)

10121 10122 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 45.000

10122 10110 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 45.000

11213 11214 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 45.000

11214 10100 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 45.000

10 20 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00 19
Angulo/Nodo @2= .00 18

30 120 Radio= 762.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
119

232 1600 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1599 Angulo/Nodo @2= .00 1598

253 1700 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1699 Angulo/Nodo @2= .00 1698

273 1800 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1799 Angulo/Nodo @2= .00 1798

293 2100 Radio= 304.800 mm. (LONG)

INPUT LISTING

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
2099 Angulo/Nodo @2= .00 2098

183 1500 Radio= 304.800 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1499

5495 5500 Radio= 304.800 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
5501

5550 5560 Radio= 304.800 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
5559

5595 5600 Radio= 457.200 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
5599

5605 5610 Radio= 457.200 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
5609

1295 1300 Radio= 304.800 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1299 Angulo/Nodo @2= .00 1298

1340 1350 Radio= 304.800 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1349

1990 2000 Radio= 304.800 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1999 Angulo/Nodo @2= .00 1998

INPUT LISTING

```
  2040            2050            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                  2049
  1045            1050            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                  1049  Angulo/Nodo @2= .00 1048
  1090            1100            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                  1099
   490             510            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                  509
   550             560            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                  559
   635           14030            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 14029  Angulo/Nodo @2= .0014028
 14025           14020            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 14019
 14020           14015            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 14014  Angulo/Nodo @2= .0014013
 14015           14010            Radio= 304.800 mm. (LONG)
                                 Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
```

INPUT LISTING

```
                                14009  Angulo/Nodo @2= .0014008
  4230          17010             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                17009  Angulo/Nodo @2= .0017008
 17010          17020             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                17019  Angulo/Nodo @2= .0017018
 17025          17030             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                17029
  1110           1250             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 1249  Angulo/Nodo @2= .00 1248
  1250          17100             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                17099
  4300          19010             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                19009
 19010          19020             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                19019  Angulo/Nodo @2= .0019018
 19025          19030             Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                19029
  1950           1960             Radio= 304.800 mm. (LONG)
```

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1959 Angulo/Nodo @2= .00 1958

1960 19100 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
19099

4400 13010 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
13009 Angulo/Nodo @2= .0013008

13010 13020 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
13019 Angulo/Nodo @2= .0013018

13025 13030 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
13029

1360 1450 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
1449 Angulo/Nodo @2= .00 1448

1450 15100 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
15099 Angulo/Nodo @2= .0015098

832 12010 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
12009 Angulo/Nodo @2= .0012008

12017 12020 Radio= 304.800 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
12019 Angulo/Nodo @2= .0012018

INPUT LISTING

```
 12025          12030            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                12029
   910            920            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 919  Angulo/Nodo @2= .00 918
   920          15010            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                15009
   691            692            Radio= 990.600 mm. (LONG)
                                Angulo (codo)= 45.000
   692            700            Radio= 990.600 mm. (LONG)
                                Angulo (codo)= 45.000
   707            710            Radio= 990.600 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 709
   710            720            Radio= 990.600 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 719
  4140           7200            Radio= 990.600 mm. (LONG)
                                Angulo (codo)= 45.000  Angulo/Nodo @1= 22.50
                                 7199
  7670           7680            Radio= 609.600 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 7679
  7690           7700            Radio= 609.600 mm. (LONG)
```

INPUT LISTING

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7699

7700 7710 Radio= 609.600 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7709 Angulo/Nodo @2= .00 7708

7720 7730 Radio= 609.600 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7729 Angulo/Nodo @2= .00 7728

7400 7410 Radio= 762.000 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7409

7415 7420 Radio= 762.000 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7419

7430 7440 Radio= 762.000 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7439 Angulo/Nodo @2= .00 7438

7445 7450 Radio= 762.000 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7449

7010 7030 Radio= 990.600 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
7031 Angulo/Nodo @2= .00 7032

570 580 Radio= 304.800 mm. (LONG)

Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
579 Angulo/Nodo @2= .00 578

INPUT LISTING

```
   580          16010            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                16009
   383           1010            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 1009  Angulo/Nodo @2= .00 1008
   970            960            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 959  Angulo/Nodo @2= .00 958
    83           2200            Radio= 228.600 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 2199
  2205           2210            Radio= 228.600 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 2211
  2210           2215            Radio= 228.600 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 2214
    85            360            Radio= 457.200 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 339  Angulo/Nodo @2= .00 338
   360            340            Radio= 457.200 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                 341
  3290           3300            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
```

INPUT LISTING

```
                                3299
  3300            3310            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                3309
  2545            2550            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                2551
  2550            2555            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                2549  Angulo/Nodo @2= .00 2548
  3090            3100            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                3099
  3100            3110            Radio= 304.800 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00
                                3109  Angulo/Nodo @2= .00 3108
    85              90            Radio= 1,143.000 mm. (LONG)
                                Angulo (codo)= 90.000  Angulo/Nodo @1= 45.00 89
   101             102            Radio= 1,143.000 mm. (LONG)
                                Angulo (codo)= 45.000
   102            9100            Radio= 1,143.000 mm. (LONG)
                                Angulo (codo)= 45.000
 11041           11042            Radio= 1,143.000 mm. (LONG)
                                Angulo (codo)= 45.000
 11042            9110            Radio= 1,143.000 mm. (LONG)
                                Angulo (codo)= 45.000
```

9120 9130 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
9129

9190 9200 Radio= 762.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
9199

9370 9380 Radio= 762.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
9379 Angulo/Nodo @2= .00 9378

9510 9520 Radio= 762.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
9519

9920 9950 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
9951

9961 9962 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 45.000

9962 10010 Radio= 1,143.000 mm. (LONG)
Angulo (codo)= 45.000

9590 9600 Radio= 762.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
9599

9800 9810 Radio= 762.000 mm. (LONG)
Angulo (codo)= 90.000 Angulo/Nodo @1= 45.00
9809

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

INPUT LISTING

Archivo: C:\DOCUMENTS AND SETTINGS\JACZ\MIS DOCUMENTOS\MISDOCS\MI...\ESTUDIO-6B

RIGIDOS

8300	8310	Peso del RIGIDO= 3,100.15 N.
8200	8210	Peso del RIGIDO= 3,100.15 N.
8100	8110	Peso del RIGIDO= 3,100.15 N.
8000	8010	Peso del RIGIDO= 3,100.15 N.
8400	8410	Peso del RIGIDO= 3,100.15 N.
40	50	Peso del RIGIDO= 6,386.32 N.
50	60	Peso del RIGIDO=84,017.20 N.
60	70	Peso del RIGIDO= 6,386.32 N.
5510	5520	Peso del RIGIDO= 6,004.30 N.
5530	5540	Peso del RIGIDO= 530.03 N.
5570	5580	Peso del RIGIDO= 3,100.15 N.
1330	1340	Peso del RIGIDO=13,146.66 N.
2030	2040	Peso del RIGIDO=13,146.66 N.
1080	1090	Peso del RIGIDO=13,146.66 N.
540	550	Peso del RIGIDO=13,146.66 N.
620	630	Peso del RIGIDO=13,146.66 N.
1230	1240	Peso del RIGIDO=13,146.66 N.
1930	1940	Peso del RIGIDO=13,146.66 N.
1430	1440	Peso del RIGIDO=13,146.66 N.
890	900	Peso del RIGIDO=13,146.66 N.
7620	7650	Peso del RIGIDO=37,279.86 N.

INPUT LISTING

7260	7270	Peso del RIGIDO=74,265.71 N.
980	970	Peso del RIGIDO=13,146.66 N.
3200	3210	Peso del RIGIDO= 687.03 N.
3220	3240	Peso del RIGIDO= 383.02 N.
3240	3250	Peso del RIGIDO= 383.02 N.
3280	3290	Peso del RIGIDO= 1,734.81 N.
2320	2500	Peso del RIGIDO= 687.03 N.
2504	2508	Peso del RIGIDO= 383.02 N.
2508	2510	Peso del RIGIDO= 383.02 N.
2540	2545	Peso del RIGIDO= 1,734.81 N.
3000	3010	Peso del RIGIDO= 687.03 N.
3020	3040	Peso del RIGIDO= 383.02 N.
3040	3050	Peso del RIGIDO= 383.02 N.
3080	3090	Peso del RIGIDO= 1,734.81 N.
9210	9220	Peso del RIGIDO= 6,200.62 N.
9230	9240	Peso del RIGIDO=33,257.66 N.
9280	9290	Peso del RIGIDO= 6,200.62 N.
9310	9320	Peso del RIGIDO= 6,200.62 N.
9350	9360	Peso del RIGIDO=33,257.66 N.
9500	9510	Peso del RIGIDO=41,086.35 N.
10020	10029	Peso del RIGIDO= .01 N.
9610	9620	Peso del RIGIDO=41,086.35 N.
9624	9627	Peso del RIGIDO= 6,200.31 N.
9630	9640	Peso del RIGIDO= 6,200.62 N.
9670	9680	Peso del RIGIDO= 6,200.62 N.
9710	9720	Peso del RIGIDO=33,257.66 N.

INPUT LISTING

9730	9800	Peso del RIGIDO= 6,200.62 N.

SIF's & TEE's

10135	10130	Node 10130 Welding Tee
20	30	Node 30 Welding Tee
149	150	Node 150 Welding Tee
229	230	Node 230 Unreinforced Tee
249	250	Node 250 Unreinforced Tee
269	270	Node 270 Unreinforced Tee
289	290	Node 290 Unreinforced Tee
179	180	Node 180 Unreinforced Tee
75	80	Node 80 Weldolet Pad= 14.300 mm.
5610	5620	Node 5620 Unreinforced Tee
1355	1360	Node 1360 Welding Tee
410	420	Node 420 Welding Tee
2060	1950	Node 1950 Welding Tee
430	440	Node 440 Welding Tee
1105	1110	Node 1110 Welding Tee
450	18000	Node 18000 Welding Tee
460	16000	Node 16000 Welding Tee
565	570	Node 570 Welding Tee
14010	707	Node 707 Unreinforced Tee
750	17000	Node 17000 Unreinforced Tee
1240	1110	Node 1110 Welding Tee

INPUT LISTING

760	19000	Node	19000	Unreinforced Tee	
1940	1950	Node	1950	Welding Tee	
780	13000	Node	13000	Unreinforced Tee	
1440	1360	Node	1360	Welding Tee	
820	12000	Node	12000	Unreinforced Tee	
900	910	Node	910	Welding Tee	
745	707	Node	707	Unreinforced Tee	
730	4000	Node	4000	Welding Tee	
4130	4140	Node	4140	Welding Tee	
7230	7240	Node	7240	Welding Tee	
350	15000	Node	15000	Welding Tee	
965	910	Node	910	Welding Tee	
81	83	Node	83	Weldolet	
2220	2225	Node	2225	Welding Tee	
110	85	Node	85	Welding Tee	Pad= 14.300 mm.
349	350	Node	350	Welding Tee	
2225	2300	Node	2300	Welding Tee	
3310	3320	Node	3320	Unreinforced Tee	
2300	2310	Node	2310	Welding Tee	
2555	2560	Node	2560	Unreinforced Tee	
2225	2240	Node	2240	Welding Tee	
3110	3120	Node	3120	Unreinforced Tee	
9150	9160	Node	9160	Welding Tee	
9300	9310	Node	9310	Welding Tee	
9320	9330	Node	9330	Welding Tee	
9330	9340	Node	9340	Welding Tee	

INPUT LISTING

9380	9390	Node	9390	Welding Tee
9550	9560	Node	9560	Welding Tee
9560	9900	Node	9900	Welding Tee
9690	9390	Node	9390	Welding Tee
9840	9160	Node	9160	Welding Tee

REDUCERS

5580	5590	Diam2= 323.850 mm.	Wall2= 8.382 mm.
		Angle= 14.60	
17110	1260	Diam2= 168.275 mm.	Wall2= 15.900 mm.
		Angle= 9.50	
19110	1970	Diam2= 168.275 mm.	Wall2= 15.900 mm.
		Angle= 9.50	
15110	1460	Diam2= 168.275 mm.	Wall2= 15.900 mm.
		Angle= 9.50	
15020	930	Diam2= 168.275 mm.	Wall2= 15.900 mm.
		Angle= 9.50	
7600	7610	Diam2= 508.000 mm.	Wall2= 38.100 mm.
		Angle= 7.20	
7615	7620	Diam2= 406.400 mm.	Wall2= 30.963 mm.
		Angle= 5.80	
7250	7260	Diam2= 508.000 mm.	Wall2= 38.100 mm.
		Angle= 7.20	
16020	590	Diam2= 168.275 mm.	Wall2= 15.900 mm.

		Angle= 9.50	
3250	3260	Diam2= 219.075 mm.	Wall2= 6.350 mm.
		Angle= 19.02	
2510	2520	Diam2= 219.075 mm.	Wall2= 6.350 mm.
		Angle= 19.02	
3050	3060	Diam2= 219.075 mm.	Wall2= 6.350 mm.
		Angle= 19.02	
9180	9190	Diam2= 508.000 mm.	Wall2= 12.700 mm.
		Angle= 11.80	
9530	9550	Diam2= 762.000 mm.	Wall2= 14.300 mm.
		Angle= 11.80	
9580	9590	Diam2= 508.000 mm.	Wall2= 12.700 mm.
		Angle= 11.80	
9820	9840	Diam2= 762.000 mm.	Wall2= 14.300 mm.
		Angle= 11.80	

RESTRICCIONES

NODO	TIPO	CNODE	RIG1	LONG. JUEGO RIG2	MU Fluencia FUERZA	Vectores Dir		
10200	+Y					.000	1.000	.000
10200	Z			2.00		.000	.000	1.000
10180	+Y					.000	1.000	.000
10160	+Y					.000	1.000	.000

INPUT LISTING

10140	+Y				.000	1.000	.000
10135	+Y				.000	1.000	.000
10120	Y2	959	1.00	3254.11	.000	1.000	.000
10120	X2	16230	1.00	55066.95	1.000	.000	.000
10120	Z2	16230	1.00	55066.95	.000	.000	1.000
10121	Y2	1368	1.00	4640.55	.000	1.000	.000
10121	X2	23144	1.00	78528.81	1.000	.000	.000
10121	Z2	23144	1.00	78528.81	.000	.000	1.000
10122	X2	817	1.00	2772.89	.000	-.707	.707
10122	X2	13830	1.00	46923.73	1.000	.000	.000
10122	X2	13830	1.00	46923.73	.000	.707	.707
10110	Z2	2633	1.00	8932.60	.000	.000	1.000
10110	X2	44551	1.00	151160.11	1.000	.000	.000
10110	Y2	44551	1.00	151160.11	.000	1.000	.000
10111	Z2	3902	1.00	13238.09	.000	.000	1.000
10111	X2	66024	1.00	224018.94	1.000	.000	.000
10111	Y2	66024	1.00	224018.94	.000	1.000	.000
10112	Z2	3355	1.00	11383.88	.000	.000	1.000
10112	X2	56776	1.00	192641.39	1.000	.000	.000
10112	Y2	56776	1.00	192641.39	.000	1.000	.000
11200	Z2	7777	1.00	26387.26	.000	.000	1.000
11200	X2	131604	1.00	446532.91	1.000	.000	.000
11200	Y2	131604	1.00	446532.91	.000	1.000	.000
11210	Z2	8186	1.00	27775.70	.000	.000	1.000
11210	X2	138529	1.00	470028.47	1.000	.000	.000
11210	Y2	138529	1.00	470028.47	.000	1.000	.000

INPUT LISTING

11211	Z2	4174	1.00	14160.76	.000	.000	1.000
11211	X2	70626	1.00	239632.56	1.000	.000	.000
11211	Y2	70626	1.00	239632.56	.000	1.000	.000
11212	Z2	4311	1.00	14626.53	.000	.000	1.000
11212	X2	72949	1.00	247514.52	1.000	.000	.000
11212	Y2	72949	1.00	247514.52	.000	1.000	.000
11213	Z2	2633	1.00	8932.60	.000	.000	1.000
11213	X2	44551	1.00	151160.11	1.000	.000	.000
11213	Y2	44551	1.00	151160.11	.000	1.000	.000
11214	X2	817	1.00	2772.89	.000	.707	.707
11214	X2	13830	1.00	46923.73	1.000	.000	.000
11214	X2	13830	1.00	46923.73	.000	.707	-.707
10100	Y2	1199	1.00	4069.12	.000	1.000	.000
10100	X2	20294	1.00	68858.78	1.000	.000	.000
10100	Z2	20294	1.00	68858.78	.000	.000	1.000
10	Y2	791	1.00	2682.67	.000	1.000	.000
10	X2	13380	1.00	45396.92	1.000	.000	.000
10	Z2	13380	1.00	45396.92	.000	.000	1.000
125	Y2	535	1.00	1612.69	.000	1.000	.000
125	X2	11993	1.00	36124.20	1.000	.000	.000
125	Z2	11993	1.00	36124.20	.000	.000	1.000
150	Y2	535	1.00	1612.69	.000	1.000	.000
150	X2	11993	1.00	36124.20	1.000	.000	.000
150	Z2	11993	1.00	36124.20	.000	.000	1.000
150	X2	604	1.00	1820.48	1.000	.000	.000
150	Z2	13539	1.00	40778.74	.000	.000	1.000

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

INPUT LISTING

150	Y2	13539	1.00	40778.74	.000	1.000	.000
220	X2	2048	1.00	6169.42	1.000	.000	.000
220	Z2	45881	1.00	138194.64	.000	.000	1.000
220	Y2	45881	1.00	138194.64	.000	1.000	.000
230	X2	1444	1.00	4348.94	1.000	.000	.000
230	Z2	32343	1.00	97415.89	.000	.000	1.000
230	Y2	32343	1.00	97415.89	.000	1.000	.000
230	Y2	237	1.00	612.13	.000	1.000	.000
230	X2	10268	1.00	26476.50	1.000	.000	.000
230	Z2	10268	1.00	26476.50	.000	.000	1.000
232	Y2	237	1.00	612.13	.000	1.000	.000
232	X2	10268	1.00	26476.50	1.000	.000	.000
232	Z2	10268	1.00	26476.50	.000	.000	1.000
8320	+Y				.000	1.000	.000
8320	X		2.00		1.000	.000	.000
230	X2	959	1.00	2887.03	1.000	.000	.000
230	Z2	21471	1.00	64669.32	.000	.000	1.000
230	Y2	21471	1.00	64669.32	.000	1.000	.000
240	X2	2289	1.00	6895.77	1.000	.000	.000
240	Z2	51283	1.00	154464.94	.000	.000	1.000
240	Y2	51283	1.00	154464.94	.000	1.000	.000
250	X2	1331	1.00	4008.74	1.000	.000	.000
250	Z2	29813	1.00	89795.62	.000	.000	1.000
250	Y2	29813	1.00	89795.62	.000	1.000	.000
250	Y2	237	1.00	612.13	.000	1.000	.000
250	X2	10268	1.00	26476.50	1.000	.000	.000

INPUT LISTING

250	Z2	10268	1.00	26476.50	.000	.000	1.000
253	Y2	237	1.00	612.13	.000	1.000	.000
253	X2	10268	1.00	26476.50	1.000	.000	.000
253	Z2	10268	1.00	26476.50	.000	.000	1.000
8220	+Y				.000	1.000	.000
8220	X		2.00		1.000	.000	.000
250	X2	959	1.00	2887.03	1.000	.000	.000
250	Z2	21471	1.00	64669.32	.000	.000	1.000
250	Y2	21471	1.00	64669.32	.000	1.000	.000
260	X2	2289	1.00	6895.77	1.000	.000	.000
260	Z2	51283	1.00	154464.94	.000	.000	1.000
260	Y2	51283	1.00	154464.94	.000	1.000	.000
270	X2	1331	1.00	4008.74	1.000	.000	.000
270	Z2	29813	1.00	89795.62	.000	.000	1.000
270	Y2	29813	1.00	89795.62	.000	1.000	.000
270	Y2	237	1.00	612.13	.000	1.000	.000
270	X2	10268	1.00	26476.50	1.000	.000	.000
270	Z2	10268	1.00	26476.50	.000	.000	1.000
273	Y2	237	1.00	612.13	.000	1.000	.000
273	X2	10268	1.00	26476.50	1.000	.000	.000
273	Z2	10268	1.00	26476.50	.000	.000	1.000
8120	+Y				.000	1.000	.000
8120	X		2.00		1.000	.000	.000
270	X2	2289	1.00	6895.77	1.000	.000	.000
270	Z2	51283	1.00	154464.95	.000	.000	1.000
270	Y2	51283	1.00	154464.95	.000	1.000	.000

INPUT LISTING

290	X2	2289	1.00	6895.77	1.000	.000	.000
290	Z2	51283	1.00	154464.95	.000	.000	1.000
290	Y2	51283	1.00	154464.95	.000	1.000	.000
290	Y2	237	1.00	612.13	.000	1.000	.000
290	X2	10268	1.00	26476.50	1.000	.000	.000
290	Z2	10268	1.00	26476.50	.000	.000	1.000
293	Y2	237	1.00	612.13	.000	1.000	.000
293	X2	10268	1.00	26476.50	1.000	.000	.000
293	Z2	10268	1.00	26476.50	.000	.000	1.000
8020	+Y				.000	1.000	.000
8020	X		2.00		1.000	.000	.000
290	X2	92	1.00	275.83	1.000	.000	.000
290	Z2	2051	1.00	6178.60	.000	.000	1.000
290	Y2	2051	1.00	6178.60	.000	1.000	.000
300	X2	92	1.00	275.83	1.000	.000	.000
300	Z2	2051	1.00	6178.60	.000	.000	1.000
300	Y2	2051	1.00	6178.60	.000	1.000	.000
150	X2	922	1.00	2776.70	1.000	.000	.000
150	Z2	20650	1.00	62197.88	.000	.000	1.000
150	Y2	20650	1.00	62197.88	.000	1.000	.000
160	X2	2531	1.00	7622.13	1.000	.000	.000
160	Z2	56685	1.00	170735.25	.000	.000	1.000
160	Y2	56685	1.00	170735.25	.000	1.000	.000
180	X2	1609	1.00	4845.43	1.000	.000	.000
180	Z2	36035	1.00	108537.37	.000	.000	1.000
180	Y2	36035	1.00	108537.37	.000	1.000	.000

INPUT LISTING

180	Y2	237	1.00	612.13	.000	1.000	.000
180	X2	10268	1.00	26476.50	1.000	.000	.000
180	Z2	10268	1.00	26476.50	.000	.000	1.000
183	Y2	237	1.00	612.13	.000	1.000	.000
183	X2	10268	1.00	26476.50	1.000	.000	.000
183	Z2	10268	1.00	26476.50	.000	.000	1.000
8420	+Y				.000	1.000	.000
8420	X		2.00		1.000	.000	.000
180	X2	92	1.00	275.83	1.000	.000	.000
180	Z2	2051	1.00	6178.60	.000	.000	1.000
180	Y2	2051	1.00	6178.60	.000	1.000	.000
190	X2	92	1.00	275.83	1.000	.000	.000
190	Z2	2051	1.00	6178.60	.000	.000	1.000
190	Y2	2051	1.00	6178.60	.000	1.000	.000
75	+Y				.000	1.000	.000
5560	+Y				.000	1.000	.000
5605	+Y				.000	1.000	.000
420	Y2	210	1.00	540.54	.000	1.000	.000
420	X2	9729	1.00	25087.76	1.000	.000	.000
420	Z2	9729	1.00	25087.76	.000	.000	1.000
1295	Y2	210	1.00	540.54	.000	1.000	.000
1295	X2	9729	1.00	25087.76	1.000	.000	.000
1295	Z2	9729	1.00	25087.76	.000	.000	1.000
1355	+Y				.000	1.000	.000
410	X2	526	1.00	1439.37	1.000	.000	.000
410	Z2	15266	1.00	41763.93	.000	.000	1.000

INPUT LISTING

410	Y2	15266	1.00	41763.93	.000	1.000	.000
420	X2	1605	1.00	4391.91	1.000	.000	.000
420	Z2	46580	1.00	127432.65	.000	.000	1.000
420	Y2	46580	1.00	127432.65	.000	1.000	.000
430	X2	1079	1.00	2952.53	1.000	.000	.000
430	Z2	31314	1.00	85668.73	.000	.000	1.000
430	Y2	31314	1.00	85668.73	.000	1.000	.000
440	Y2	210	1.00	540.54	.000	1.000	.000
440	X2	9729	1.00	25087.76	1.000	.000	.000
440	Z2	9729	1.00	25087.76	.000	.000	1.000
1990	Y2	210	1.00	540.54	.000	1.000	.000
1990	X2	9729	1.00	25087.76	1.000	.000	.000
1990	Z2	9729	1.00	25087.76	.000	.000	1.000
2060	+Y				.000	1.000	.000
430	X2	526	1.00	1439.37	1.000	.000	.000
430	Z2	15266	1.00	41763.93	.000	.000	1.000
430	Y2	15266	1.00	41763.93	.000	1.000	.000
440	X2	1605	1.00	4391.91	1.000	.000	.000
440	Z2	46580	1.00	127432.65	.000	.000	1.000
440	Y2	46580	1.00	127432.65	.000	1.000	.000
450	X2	1079	1.00	2952.53	1.000	.000	.000
450	Z2	31314	1.00	85668.73	.000	.000	1.000
450	Y2	31314	1.00	85668.73	.000	1.000	.000
18000	Y2	210	1.00	540.54	.000	1.000	.000
18000	X2	9729	1.00	25087.76	1.000	.000	.000
18000	Z2	9729	1.00	25087.76	.000	.000	1.000

INPUT LISTING

1045	Y2	210	1.00	540.54	.000	1.000	.000
1045	X2	9729	1.00	25087.76	1.000	.000	.000
1045	Z2	9729	1.00	25087.76	.000	.000	1.000
1105	+Y				.000	1.000	.000
450	X2	526	1.00	1439.37	1.000	.000	.000
450	Z2	15266	1.00	41763.93	.000	.000	1.000
450	Y2	15266	1.00	41763.93	.000	1.000	.000
18000	X2	1605	1.00	4391.91	1.000	.000	.000
18000	Z2	46580	1.00	127432.65	.000	.000	1.000
18000	Y2	46580	1.00	127432.65	.000	1.000	.000
460	X2	1605	1.00	4391.91	1.000	.000	.000
460	Z2	46580	1.00	127432.65	.000	.000	1.000
460	Y2	46580	1.00	127432.65	.000	1.000	.000
16000	X2	580	1.00	1588.11	1.000	.000	.000
16000	Z2	16843	1.00	46079.64	.000	.000	1.000
16000	Y2	16843	1.00	46079.64	.000	1.000	.000
470	X2	54	1.00	148.74	1.000	.000	.000
470	Z2	1578	1.00	4315.72	.000	.000	1.000
470	Y2	1578	1.00	4315.72	.000	1.000	.000
16000	Y2	210	1.00	540.54	.000	1.000	.000
16000	X2	9729	1.00	25087.76	1.000	.000	.000
16000	Z2	9729	1.00	25087.76	.000	.000	1.000
490	Y2	210	1.00	540.54	.000	1.000	.000
490	X2	9729	1.00	25087.76	1.000	.000	.000
490	Z2	9729	1.00	25087.76	.000	.000	1.000
565	+Y				.000	1.000	.000

INPUT LISTING

635	+Y				.000	1.000	.000
680	X2	5385	1.00	18095.44	1.000	.000	.000
680	Z2	44440	1.00	149344.20	.000	.000	1.000
680	Y2	44440	1.00	149344.20	.000	1.000	.000
750	X2	6009	1.00	20192.34	1.000	.000	.000
750	Z2	49589	1.00	166650.20	.000	.000	1.000
750	Y2	49589	1.00	166650.20	.000	1.000	.000
17000	X2	1548	1.00	5203.41	1.000	.000	.000
17000	Z2	12779	1.00	42944.47	.000	.000	1.000
17000	Y2	12779	1.00	42944.47	.000	1.000	.000
755	X2	924	1.00	3106.51	1.000	.000	.000
755	Z2	7629	1.00	25638.49	.000	.000	1.000
755	Y2	7629	1.00	25638.49	.000	1.000	.000
17000	Y2	422	1.00	1137.58	.000	1.000	.000
17000	X2	11211	1.00	30254.57	1.000	.000	.000
17000	Z2	11211	1.00	30254.57	.000	.000	1.000
4230	Y2	422	1.00	1137.58	.000	1.000	.000
4230	X2	11211	1.00	30254.57	1.000	.000	.000
4230	Z2	11211	1.00	30254.57	.000	.000	1.000
17025	+Y				.000	1.000	.000
1225	+Y				.000	1.000	.000
755	X2	5385	1.00	18095.44	1.000	.000	.000
755	Z2	44440	1.00	149344.20	.000	.000	1.000
755	Y2	44440	1.00	149344.20	.000	1.000	.000
760	X2	6009	1.00	20192.34	1.000	.000	.000
760	Z2	49589	1.00	166650.20	.000	.000	1.000

INPUT LISTING

760	Y2	49589	1.00	166650.20	.000	1.000	.000
19000	X2	1548	1.00	5203.41	1.000	.000	.000
19000	Z2	12779	1.00	42944.47	.000	.000	1.000
19000	Y2	12779	1.00	42944.47	.000	1.000	.000
770	X2	924	1.00	3106.51	1.000	.000	.000
770	Z2	7629	1.00	25638.49	.000	.000	1.000
770	Y2	7629	1.00	25638.49	.000	1.000	.000
19000	Y2	422	1.00	1137.58	.000	1.000	.000
19000	X2	11211	1.00	30254.57	1.000	.000	.000
19000	Z2	11211	1.00	30254.57	.000	.000	1.000
4300	Y2	422	1.00	1137.58	.000	1.000	.000
4300	X2	11211	1.00	30254.57	1.000	.000	.000
4300	Z2	11211	1.00	30254.57	.000	.000	1.000
19025	+Y				.000	1.000	.000
1925	+Y				.000	1.000	.000
770	X2	5385	1.00	18095.44	1.000	.000	.000
770	Z2	44440	1.00	149344.20	.000	.000	1.000
770	Y2	44440	1.00	149344.20	.000	1.000	.000
780	X2	6009	1.00	20192.34	1.000	.000	.000
780	Z2	49589	1.00	166650.20	.000	.000	1.000
780	Y2	49589	1.00	166650.20	.000	1.000	.000
13000	X2	1548	1.00	5203.41	1.000	.000	.000
13000	Z2	12779	1.00	42944.47	.000	.000	1.000
13000	Y2	12779	1.00	42944.47	.000	1.000	.000
790	X2	924	1.00	3106.51	1.000	.000	.000
790	Z2	7629	1.00	25638.49	.000	.000	1.000

INPUT LISTING

790	Y2	7629	1.00	25638.49	.000	1.000	.000
13000	Y2	422	1.00	1137.58	.000	1.000	.000
13000	X2	11211	1.00	30254.57	1.000	.000	.000
13000	Z2	11211	1.00	30254.57	.000	.000	1.000
4400	Y2	422	1.00	1137.58	.000	1.000	.000
4400	X2	11211	1.00	30254.57	1.000	.000	.000
4400	Z2	11211	1.00	30254.57	.000	.000	1.000
13025	+Y				.000	1.000	.000
1425	+Y				.000	1.000	.000
790	X2	3074	1.00	10329.16	1.000	.000	.000
790	Z2	25367	1.00	85247.98	.000	.000	1.000
790	Y2	25367	1.00	85247.98	.000	1.000	.000
800	X2	7696	1.00	25861.73	1.000	.000	.000
800	Z2	63513	1.00	213440.44	.000	.000	1.000
800	Y2	63513	1.00	213440.44	.000	1.000	.000
810	X2	9244	1.00	31065.14	1.000	.000	.000
810	Z2	76291	1.00	256384.92	.000	.000	1.000
810	Y2	76291	1.00	256384.92	.000	1.000	.000
820	X2	5246	1.00	17629.47	1.000	.000	.000
820	Z2	43295	1.00	145498.44	.000	.000	1.000
820	Y2	43295	1.00	145498.44	.000	1.000	.000
12000	X2	901	1.00	3028.85	1.000	.000	.000
12000	Z2	7438	1.00	24997.53	.000	.000	1.000
12000	Y2	7438	1.00	24997.53	.000	1.000	.000
830	X2	277	1.00	931.95	1.000	.000	.000
830	Z2	2289	1.00	7691.55	.000	.000	1.000

INPUT LISTING

830	Y2	2289	1.00	7691.55	.000	1.000	.000
12000	Y2	422	1.00	1137.58	.000	1.000	.000
12000	X2	11211	1.00	30254.57	1.000	.000	.000
12000	Z2	11211	1.00	30254.57	.000	.000	1.000
832	Y2	422	1.00	1137.58	.000	1.000	.000
832	X2	11211	1.00	30254.57	1.000	.000	.000
832	Z2	11211	1.00	30254.57	.000	.000	1.000
12025	+Y				.000	1.000	.000
885	+Y				.000	1.000	.000
680	X2	924	1.00	3106.51	1.000	.000	.000
680	Z2	7629	1.00	25638.49	.000	.000	1.000
680	Y2	7629	1.00	25638.49	.000	1.000	.000
14000	X2	1548	1.00	5203.41	1.000	.000	.000
14000	Z2	12779	1.00	42944.47	.000	.000	1.000
14000	Y2	12779	1.00	42944.47	.000	1.000	.000
690	X2	1557	1.00	5232.61	1.000	.000	.000
690	Z2	12851	1.00	43185.48	.000	.000	1.000
690	Y2	12851	1.00	43185.48	.000	1.000	.000
691	X2	1652	1.00	5552.63	1.000	.000	.000
691	Z2	13636	1.00	45826.64	.000	.000	1.000
691	Y2	13636	1.00	45826.64	.000	1.000	.000
692	X2	1438	1.00	4833.83	-.707	.707	.000
692	Z2	11871	1.00	39894.28	.000	.000	1.000
692	X2	11871	1.00	39894.28	.707	.707	.000
700	Y2	1495	1.00	5024.52	.000	1.000	.000
700	X2	12339	1.00	41468.09	1.000	.000	.000

INPUT LISTING

700	Z2	12339	1.00	41468.09	.000	.000	1.000
705	Y2	776	1.00	2607.61	.000	1.000	.000
705	X2	6404	1.00	21520.95	1.000	.000	.000
705	Z2	6404	1.00	21520.95	.000	.000	1.000
4120	+Y				.000	1.000	.000
4120	X		2.00		1.000	.000	.000
4130	+Y				.000	1.000	.000
7210	+Y				.000	1.000	.000
7220	+Y				.000	1.000	.000
7230	+Y				.000	1.000	.000
7615	+Y				.000	1.000	.000
7660	+Y				.000	1.000	.000
7670	+Y				.000	1.000	.000
7690	+Y				.000	1.000	.000
7720	+Y				.000	1.000	.000
7740	+Y				.000	1.000	.000
7750	+Y				.000	1.000	.000
7750	X		2.00		1.000	.000	.000
7760	+Y				.000	1.000	.000
7790	+Y				.000	1.000	.000
7800	+Y				.000	1.000	.000
7810	+Y				.000	1.000	.000
7810	Z		2.00		.000	.000	1.000
7810	X		2.00		1.000	.000	.000
7820	+Y				.000	1.000	.000
7830	+Y				.000	1.000	.000

INPUT LISTING

7830	X	2.00	1.000	.000	.000
7840	+Y		.000	1.000	.000
7870	+Y		.000	1.000	.000
7870	X	10.00	1.000	.000	.000
7880	+Y		.000	1.000	.000
7280	+Y		.000	1.000	.000
7300	+Y		.000	1.000	.000
7320	+Y		.000	1.000	.000
7330	+Y		.000	1.000	.000
7330	Z	2.00	.000	.000	1.000
7330	X	2.00	1.000	.000	.000
7340	+Y		.000	1.000	.000
7350	+Y		.000	1.000	.000
7350	X	2.00	1.000	.000	.000
7370	+Y		.000	1.000	.000
7380	+Y		.000	1.000	.000
7400	+Y		.000	1.000	.000
7400	X	2.00	1.000	.000	.000
7415	+Y		.000	1.000	.000
7445	+Y		.000	1.000	.000
7460	+Y		.000	1.000	.000
7460	X	2.00	1.000	.000	.000
7480	+Y		.000	1.000	.000
7480	Z	2.00	.000	.000	1.000
7490	+Y		.000	1.000	.000
7490	X	2.00	1.000	.000	.000

INPUT LISTING

4005	+Y				.000	1.000	.000
4010	+Y				.000	1.000	.000
4020	+Y				.000	1.000	.000
4030	+Y				.000	1.000	.000
4030	X		4.00		1.000	.000	.000
4040	+Y				.000	1.000	.000
4050	+Y				.000	1.000	.000
4050	X		4.00		1.000	.000	.000
4050	Z		4.00		.000	.000	1.000
7000	+Y				.000	1.000	.000
7010	+Y				.000	1.000	.000
7040	+Y				.000	1.000	.000
7060	+Y				.000	1.000	.000
7080	+Y				.000	1.000	.000
7100	+Y				.000	1.000	.000
7100	Z		2.00		.000	.000	1.000
350	X2	1246	1.00	3408.12	1.000	.000	.000
350	Z2	36146	1.00	98887.73	.000	.000	1.000
350	Y2	36146	1.00	98887.73	.000	1.000	.000
15000	X2	1300	1.00	3556.86	1.000	.000	.000
15000	Z2	37724	1.00	103203.45	.000	.000	1.000
15000	Y2	37724	1.00	103203.45	.000	1.000	.000
380	X2	54	1.00	148.74	1.000	.000	.000
380	Z2	1578	1.00	4315.72	.000	.000	1.000
380	Y2	1578	1.00	4315.72	.000	1.000	.000
15000	Y2	210	1.00	540.54	.000	1.000	.000

INPUT LISTING

15000	X2	9729	1.00	25087.76	1.000	.000	.000
15000	Z2	9729	1.00	25087.76	.000	.000	1.000
383	Y2	210	1.00	540.54	.000	1.000	.000
383	X2	9729	1.00	25087.76	1.000	.000	.000
383	Z2	9729	1.00	25087.76	.000	.000	1.000
965	+Y				.000	1.000	.000
2205	+Y				.000	1.000	.000
2220	+Y				.000	1.000	.000
346	Y2	356	1.00	973.25	.000	1.000	.000
346	X2	10322	1.00	28239.07	1.000	.000	.000
346	Z2	10322	1.00	28239.07	.000	.000	1.000
350	Y2	356	1.00	973.25	.000	1.000	.000
350	X2	10322	1.00	28239.07	1.000	.000	.000
350	Z2	10322	1.00	28239.07	.000	.000	1.000
2300	+Y				.000	1.000	.000
2310	+Y				.000	1.000	.000
2310	Z		2.00		.000	.000	1.000
6120	+Y				.000	1.000	.000
6100	+Y				.000	1.000	.000
6110	+Y				.000	1.000	.000
6110	Z		2.00		.000	.000	1.000
6130	+Y				.000	1.000	.000
6130	Z		10.00		.000	.000	1.000
2240	+Y				.000	1.000	.000
2240	Z		2.00		.000	.000	1.000
100	Y2	711	1.00	2413.52	.000	1.000	.000

INPUT LISTING

100	X2	13480	1.00	45736.67	1.000	.000	.000
100	Z2	13480	1.00	45736.67	.000	.000	1.000
101	Y2	1076	1.00	3651.60	.000	1.000	.000
101	X2	20395	1.00	69198.53	1.000	.000	.000
101	Z2	20395	1.00	69198.53	.000	.000	1.000
102	X2	730	1.00	2476.16	.000	-.707	.707
102	X2	13830	1.00	46923.73	1.000	.000	.000
102	X2	13830	1.00	46923.73	.000	.707	.707
9100	Z2	2259	1.00	7665.29	.000	.000	1.000
9100	X2	42811	1.00	145258.72	1.000	.000	.000
9100	Y2	42811	1.00	145258.72	.000	1.000	.000
9101	Z2	4454	1.00	15111.40	.000	.000	1.000
9101	X2	84398	1.00	286363.81	1.000	.000	.000
9101	Y2	84398	1.00	286363.81	.000	1.000	.000
11000	Z2	7478	1.00	25371.96	.000	.000	1.000
11000	X2	141704	1.00	480803.38	1.000	.000	.000
11000	Y2	141704	1.00	480803.38	.000	1.000	.000
11010	Z2	9837	1.00	33375.55	.000	.000	1.000
11010	X2	186405	1.00	632472.81	1.000	.000	.000
11010	Y2	186405	1.00	632472.81	.000	1.000	.000
11020	Z2	9837	1.00	33375.55	.000	.000	1.000
11020	X2	186405	1.00	632472.81	1.000	.000	.000
11020	Y2	186405	1.00	632472.81	.000	1.000	.000
11030	Z2	9837	1.00	33375.55	.000	.000	1.000
11030	X2	186405	1.00	632472.81	1.000	.000	.000
11030	Y2	186405	1.00	632472.81	.000	1.000	.000

INPUT LISTING

11040	Z2	5469	1.00	18557.91	.000	.000	1.000
11040	X2	103647	1.00	351675.78	1.000	.000	.000
11040	Y2	103647	1.00	351675.78	.000	1.000	.000
11041	Z2	916	1.00	3108.22	.000	.000	1.000
11041	X2	17360	1.00	58901.25	1.000	.000	.000
11041	Y2	17360	1.00	58901.25	.000	1.000	.000
11042	X2	730	1.00	2476.16	.000	.707	.707
11042	X2	13830	1.00	46923.73	1.000	.000	.000
11042	X2	13830	1.00	46923.73	.000	.707	-.707
9110	Y2	1076	1.00	3651.60	.000	1.000	.000
9110	X2	20395	1.00	69198.54	1.000	.000	.000
9110	Z2	20395	1.00	69198.54	.000	.000	1.000
9120	Y2	711	1.00	2413.52	.000	1.000	.000
9120	X2	13480	1.00	45736.68	1.000	.000	.000
9120	Z2	13480	1.00	45736.68	.000	.000	1.000
9150	+Y				.000	1.000	.000
9250	+Y				.000	1.000	.000
9300	+Y				.000	1.000	.000
9370	+Y				.000	1.000	.000
9370	X		2.00		1.000	.000	.000
9335	+Y				.000	1.000	.000
9900	+Y				.000	1.000	.000
9960	Y2	406	1.00	1379.16	.000	1.000	.000
9960	X2	7703	1.00	26135.24	1.000	.000	.000
9960	Z2	7703	1.00	26135.24	.000	.000	1.000
9961	Y2	771	1.00	2617.24	.000	1.000	.000

INPUT LISTING

9961	X2	14617	1.00	49597.11	1.000	.000	.000
9961	Z2	14617	1.00	49597.11	.000	.000	1.000
9962	X2	730	1.00	2476.16	.000	-.707	.707
9962	X2	13830	1.00	46923.73	1.000	.000	.000
9962	X2	13830	1.00	46923.73	.000	.707	.707
10010	Z2	2259	1.00	7665.29	.000	.000	1.000
10010	X2	42811	1.00	145258.72	1.000	.000	.000
10010	Y2	42811	1.00	145258.72	.000	1.000	.000
10011	Z2	3235	1.00	10976.87	.000	.000	1.000
10011	X2	61307	1.00	208013.69	1.000	.000	.000
10011	Y2	61307	1.00	208013.69	.000	1.000	.000
10012	Z2	2682	1.00	9099.31	.000	.000	1.000
10012	X2	50820	1.00	172433.67	1.000	.000	.000
10012	Y2	50820	1.00	172433.67	.000	1.000	.000
11100	Z2	6382	1.00	21652.56	.000	.000	1.000
11100	X2	120931	1.00	410319.94	1.000	.000	.000
11100	Y2	120931	1.00	410319.94	.000	1.000	.000
11110	Z2	5102	1.00	17309.78	.000	.000	1.000
11110	X2	96677	1.00	328023.38	1.000	.000	.000
11110	Y2	96677	1.00	328023.38	.000	1.000	.000
10020	Z2	264	1.00	895.07	.000	.000	1.000
10020	X2	4999	1.00	16961.77	1.000	.000	.000
10020	Y2	4999	1.00	16961.77	.000	1.000	.000
10030	Z2	203	1.00	688.20	.000	.000	1.000
10030	X2	3844	1.00	13041.48	1.000	.000	.000
10030	Y2	3844	1.00	13041.48	.000	1.000	.000

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    9622    +Y                                                .000  1.000   .000

    9660    +Y                                                .000  1.000   .000

    9690    +Y                                                .000  1.000   .000
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DESPLAZAMIENTO

1610	1650	Nodo 1650 DX1= .000 mm. DY1= .000 mm. DZ1= -3.000 mm. RX1= .000 RY1= .000 RZ1= .000
1710	1750	Nodo 1750 DX1= .000 mm. DY1= .000 mm. DZ1= -3.000 mm. RX1= .000 RY1= .000 RZ1= .000
1810	1850	Nodo 1850 DX1= .000 mm. DY1= .000 mm. DZ1= -3.000 mm. RX1= .000 RY1= .000 RZ1= .000
2110	2150	Nodo 2150 DX1= .000 mm. DY1= .000 mm. DZ1= -3.000 mm. RX1= .000 RY1= .000 RZ1= .000
1510	1550	Nodo 1550 DX1= .000 mm. DY1= .000 mm. DZ1= -3.000 mm. RX1= .000 RY1= .000 RZ1= .000
5610	5620	Nodo 5620 DX1= 77.011 mm. DY1= .000 mm. DZ1= -6.442 mm. RX1= -.000 RY1= -.048

INPUT LISTING

```
                                  RZ1= .000
  1260            1270            Nodo  1270  DX1= .000 mm.  DY1= .000 mm.
                                 DZ1= .000 mm.   RX1= .000   RY1= .000
                                  RZ1= .000
  1970            1980            Nodo  1980  DX1= .000 mm.  DY1= .000 mm.
                                 DZ1= .000 mm.   RX1= .000   RY1= .000
                                  RZ1= .000
  1460            1470            Nodo  1470  DX1= .000 mm.  DY1= .000 mm.
                                 DZ1= .000 mm.   RX1= .000   RY1= .000
                                  RZ1= .000
   930             940            Nodo   940  DX1= .000 mm.  DY1= .000 mm.
                                 DZ1= .000 mm.   RX1= .000   RY1= .000
                                  RZ1= .000
   590             600            Nodo   600  DX1= .000 mm.  DY1= .000 mm.
                                 DZ1= .000 mm.   RX1= .000   RY1= .000
                                  RZ1= .000
  3310            3320            Nodo  3320  DX1= 80.898 mm.  DY1= .000 mm.
                                 DZ1= -4.528 mm.   RX1= -.000   RY1= -.042
                                  RZ1= .000
  2555            2560            Nodo  2560  DX1= 78.034 mm.  DY1= .000 mm.
                                 DZ1= -5.915 mm.   RX1= -.000   RY1= -.046
                                  RZ1= .000
  3110            3120            Nodo  3120  DX1= 83.762 mm.  DY1= .000 mm.
                                 DZ1= -3.256 mm.   RX1= -.000   RY1= -.039
                                  RZ1= .000
```

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

INPUT LISTING

Archivo: C:\DOCUMENTS AND SETTINGS\JACZ\MIS DOCUMENTOS\MISDOCS\MI...\ESTUDIO-6B

UNIDADES DE ENTRADA DE DATOS...

UNITS= SI (m NOM/SCH INPUT= ON

LENGTH	inches	x	25.400	=	mm.
FORCE	pounds	x	4.448	=	N.
MASS(dynamics)	pounds	x	0.454	=	Kg.
MOMENTS(INPUT)	inch-pounds	x	0.113	=	N.m.
MOMENTS(OUTPUT)	inch-pounds	x	0.113	=	N.m.
STRESS	lbs./sq.in.	x	6.895	=	KPa
TEMP. SCALE	degrees F.	x	0.556	=	C
PRESSURE	psig	x	6.895	=	KPa
ELASTIC MODULUS	lbs./sq.in.	x	6.895	=	KPa
PIPE DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
INSULATION DENS.	lbs./cu.in.	x	0.028	=	kg./cu.cm.
FLUID DENSITY	lbs./cu.in.	x	0.028	=	kg./cu.cm.
TRANSL. STIF	lbs./in.	x	1.751	=	N./cm.
ROTATIONAL STIF	in.lb./deg.	x	0.113	=	N.m./deg
UNIFORM LOAD	lb./in.	x	1.751	=	N./cm.
G LOAD	g's	x	1.000	=	g's
WIND LOAD	lbs./sq.in.	x	6.895	=	KPa
ELEVATION	inches	x	0.025	=	m.
COMPOUND LENGTH	inches	x	25.400	=	mm.
DIAMETER	inches	x	25.400	=	mm.
WALL THICKNESS	inches	x	25.400	=	mm.

INPUT LISTING

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ARCHIVO DE PARAMETROS DE CONFIGURACION

CONNECT GEOMETRY THRU CNODES = YES

MIN ALLOWED BEND ANGLE = 5.00000

MAX ALLOWED BEND ANGLE = 95.0000

BEND LENGTH ATTACHMENT PERCENT = 1.00000

MIN ANGLE TO ADJACENT BEND PT = 5.00000

LOOP CLOSURE TOLERANCE = 25.4000 mm.

THERMAL BOWING HORZ TOLERANCE = 0.100000E-03

AUTO NODE NUMBER INCREMENT= 10.0000

Z AXIS UP= NO

USE PRESSURE STIFFENING = DEFAULT

ALPHA TOLERANCE = 0.500000E-01

RESLD-FORCE = NO

HGR DEF RESWGT STIF = 0.175127E+13 N./cm.

DECOMP SNG TOL = 0.100000E+11

BEND AXIAL SHAPE = YES

FRICT STIF = 0.175127E+07 N./cm.

FRICT NORM FORCE VAR = 0.150000

FRICT ANGLE VAR = 15.0000

FRICT SLIDE MULT = 1.00000

ROD TOLERANCE = 1.00000

ROD INC = 2.00000

INPUT LISTING

```
  INCORE NUMERICAL CHECK =           NO
  OUTCORE NUMERICAL CHECK =          NO
  DEFAULT TRANS RESTRAINT STIFF=     0.175127E+13    N./cm.
  DEFAULT ROT RESTRAINT STIFF=       0.112985E+12  N.m./deg
  IGNORE SPRING HANGER STIFFNESS =   NO
  MISSING MASS ZPA =                EXTRACTED
  MIN WALL MILL TOLERANCE =           12.5000
  WRC-107 VERSION =                 MAR 79 1B1/2B1
  WRC-107 INTERPOLATION =           LAST VALUE
  DEFAULT AMBIENT TEMPERATURE=        21.1111       C
  BOURDON PRESSURE=                 NONE
  COEFFICIENT OF FRICTION (MU) =         0.000000
  INCLUDE SPRG STIF IN HGR OPE =    NO
  INCLUDE INSULATION IN HYDROTEST = NO
  REDUCED INTERSECTION =            B31.1(POST1980)
  USE WRC329                        NO
  NO REDUCED SIF FOR RFT AND WLT    NO
  B31.1 REDUCED Z FIX =             YES
  CLASS 1 BRANCH FLEX               NO
  ALL STRESS CASES CORRODED =       NO
  ADD TORSION IN SL STRESS =        DEFAULT
  ADD F/A IN STRESS =               DEFAULT
  OCCASIONAL LOAD FACTOR =               0.000000
  DEFAULT CODE =                    B31.3
  B31.3 SUS CASE SIF FACTOR =         1.00000
  ALLOW USERS BEND SIF =            NO
```

INPUT LISTING

```
  USE SCHNEIDER                     NO
  YIELD CRITERION STRESS =          MAX 3D SHEAR
  USE PD/4T                          NO
  BASE HOOP STRESS ON ? =            ID
  EN13480 USE IN OUTPLANE SIFS=      NO
  LIBERAL EXPANSION ALLOWABLE=      YES
  B31.3 SEC 319.2.3C SAXIAL=        NO
  B31.3 WELDING/CONTOUR TEE ISB16.9  NO
  PRESSURE VARIATION IN EXP CASE=   DEFAULT
  IMPLEMENT B313 APP-P               NO
  IMPLEMENT B313 CODE CASE 178       NO
  USE FRP SIF =                     YES
  USE FRP FLEX =                    YES
  BS 7159 Pressure Stiffening=      Design Strain
  FRP Property Data File=           CAESAR.FRP
  FRP Emod (axial) =                 0.220632E+08    KPa
  FRP Ratio Gmod/Emod (axial) =      0.250000
  FRP Ea/Eh*Vh/a =                   0.152727
  FRP Laminate Type =               THREE
  FRP Alpha =                         21.6000             C
  FRP Density =                      0.166079E-02 kg./cu.cm.
  EXCLUDE f2 FROM UKOOA BENDING =   NO
```

INPUT LISTING

PARAMETROS DE EJECUCION

Rigido/JE Bandera Impresion.	1.000	
Calculo Bourdon.....	.000	
Bandera Cierre Lazo.....	2.000	
Deflexion por Temp	.000	C
Bandera Esf Adm Libre.....	1.000	
Opcion Carga Uniforme.....	.000	
Temperatura Ambiente.....	21.108	C
Coeficiente Plasticidad.....	21.600	
Plastico (FRP) GMOD/EMODa ..	.250	
Plastico (FRP) Tipo Laminado	3.000	
Obtimizador Ecuaciones.....	.000	
Seleccion Nodos	.000	
Ordenamiento Ecuaciones.....	.000	
Collins	.000	
Determinacion Grados	.000	
Control Ecuaciones Usuario..	.000	

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REPORTE DE COORDENADAS

	/----------(mm.)----------/		
NODO	X	Y	Z
10210	-630450.0000	104881.0000	-676400.0000

INPUT LISTING

10200	-630200.0000	104881.0000	-676400.0000
10190	-628450.0000	104881.0000	-676400.0000
10180	-623200.0000	104881.0000	-676400.0000
10170	-621450.0000	104881.0000	-676400.0000
10160	-616200.0000	104881.0000	-676400.0000
10150	-614450.0000	104881.0000	-676400.0000
10140	-609200.0000	104881.0000	-676400.0000
10135	-602200.0000	104881.0000	-676400.0000
10130	-599450.0000	104881.0000	-676400.0000
10300	-598891.0000	104881.0000	-676400.0000
10130	-599450.0000	104881.0000	-676400.0000
10260	-599450.0000	101400.0000	-676400.0000
10250	-599450.0000	100100.0000	-676400.0000
10120	-599450.0000	100000.0000	-676400.0000
10121	-599450.0000	97893.0000	-676400.0000
10122	-599450.0000	97419.5547	-676400.0000
10110	-599450.0000	96750.0000	-675730.4375
10111	-599450.0000	96750.0000	-670370.9375
10112	-599450.0000	96750.0000	-666685.4375
11200	-599450.0000	96750.0000	-662999.9375
11210	-599450.0000	96750.0000	-649599.9375
11211	-599450.0000	96750.0000	-645015.4375
11212	-599450.0000	96750.0000	-640430.9375
11213	-599450.0000	96750.0000	-635544.8750
11214	-599450.0000	96750.0000	-635071.4375
10100	-599450.0000	97419.5547	-634401.8750

INPUT LISTING

9	-599450.0000	98524.7813	-634401.8750
10	-599450.0000	99630.0078	-634401.8750
20	-599450.0000	100786.0078	-634401.8750
30	-599450.0000	100786.0078	-632699.8750
120	-597850.0000	100786.0078	-632699.8750
125	-597850.0000	100000.0078	-632699.8750
149	-597850.0000	99123.0078	-632699.8750
150	-597850.0000	98246.0078	-632699.8750
220	-599830.0000	98246.0078	-632699.8750
229	-602195.0000	98246.0078	-632699.8750
230	-604560.0000	98246.0078	-632699.8750
231	-604560.0000	99123.0078	-632699.8750
232	-604560.0000	100000.0078	-632699.8750
1600	-604560.0000	100960.0078	-632699.8750
8300	-604560.0000	100960.0078	-631694.8750
8310	-604560.0000	100960.0078	-630748.8750
8320	-604560.0000	100960.0078	-630399.8750
1610	-604560.0000	100960.0078	-626899.8750
1650	-604560.0000	100960.0078	-621999.8750
230	-604560.0000	98246.0078	-632699.8750
240	-607700.0000	98246.0078	-632699.8750
249	-609880.0000	98246.0078	-632699.8750
250	-612060.0000	98246.0078	-632699.8750
252	-612060.0000	99123.0078	-632699.8750
253	-612060.0000	100000.0078	-632699.8750
1700	-612060.0000	100960.0078	-632699.8750

INPUT LISTING

8200	-612060.0000	100960.0078	-631694.8750
8210	-612060.0000	100960.0078	-630748.8750
8220	-612060.0000	100960.0078	-630399.8750
1710	-612060.0000	100960.0078	-626899.8750
1750	-612060.0000	100960.0078	-621999.8750
250	-612060.0000	98246.0078	-632699.8750
260	-615200.0000	98246.0078	-632699.8750
269	-617380.0000	98246.0078	-632699.8750
270	-619560.0000	98246.0078	-632699.8750
272	-619560.0000	99123.0078	-632699.8750
273	-619560.0000	100000.0078	-632699.8750
1800	-619560.0000	100960.0078	-632699.8750
8100	-619560.0000	100960.0078	-631694.8750
8110	-619560.0000	100960.0078	-630748.8750
8120	-619560.0000	100960.0078	-630399.8750
1810	-619560.0000	100960.0078	-626899.8750
1850	-619560.0000	100960.0078	-621999.8750
270	-619560.0000	98246.0078	-632699.8750
289	-623310.0000	98246.0078	-632699.8750
290	-627060.0000	98246.0078	-632699.8750
292	-627060.0000	99123.0078	-632699.8750
293	-627060.0000	100000.0078	-632699.8750
2100	-627060.0000	100960.0078	-632699.8750
8000	-627060.0000	100960.0078	-631694.8750
8010	-627060.0000	100960.0078	-630748.8750
8020	-627060.0000	100960.0078	-630399.8750

INPUT LISTING

2110	-627060.0000	100960.0078	-626899.8750
2150	-627060.0000	100960.0078	-621999.8750
290	-627060.0000	98246.0078	-632699.8750
299	-627210.0000	98246.0078	-632699.8750
300	-627360.0000	98246.0078	-632699.8750
150	-597850.0000	98246.0078	-632699.8750
160	-594830.0000	98246.0078	-632699.8750
179	-592195.0000	98246.0078	-632699.8750
180	-589560.0000	98246.0078	-632699.8750
182	-589560.0000	99123.0078	-632699.8750
183	-589560.0000	100000.0078	-632699.8750
1500	-589560.0000	100960.0078	-632699.8750
8400	-589560.0000	100960.0078	-631694.8750
8410	-589560.0000	100960.0078	-630748.8750
8420	-589560.0000	100960.0078	-630399.8750
1510	-589560.0000	100960.0078	-626899.8750
1550	-589560.0000	100960.0078	-621999.8750
180	-589560.0000	98246.0078	-632699.8750
189	-589410.0000	98246.0078	-632699.8750
190	-589260.0000	98246.0078	-632699.8750
30	-599450.0000	100786.0078	-632699.8750
35	-599450.0000	100786.0078	-632141.8750
40	-599450.0000	100786.0078	-630841.8750
50	-599450.0000	100786.0078	-630636.8750
60	-599450.0000	100786.0078	-628899.8750
70	-599450.0000	100786.0078	-628694.8750

INPUT LISTING

75	-599450.0000	100786.0078	-628372.3750
80	-599450.0000	100786.0078	-628049.8750
5495	-598750.0000	100786.0078	-628049.8750
5500	-598250.0000	100786.0078	-628049.8750
5510	-598250.0000	100786.0078	-628354.8750
5520	-598250.0000	100786.0078	-629160.8750
5530	-598250.0000	100786.0078	-631046.8750
5540	-598250.0000	100786.0078	-631186.8750
5550	-598250.0000	100786.0078	-631294.8750
5560	-598250.0000	100786.0078	-631699.8750
5570	-598250.0000	101091.0078	-631699.8750
5580	-598250.0000	102037.0078	-631699.8750
5590	-598250.0000	102239.0078	-631699.8750
5595	-598250.0000	105650.0078	-631699.8750
5600	-598250.0000	107150.0078	-631699.8750
5605	-598250.0000	107150.0078	-630999.8750
5610	-598250.0000	107150.0078	-627949.8750
5620	-599059.0000	106341.0078	-627949.8750
2560	-598413.0000	106341.0078	-627949.8750
350	-598520.0000	98338.0078	-626299.8750
400	-602700.0000	98338.0078	-626299.8750
410	-605242.0000	98338.0078	-626299.8750
420	-607700.0000	98338.0078	-626299.8750
1294	-607700.0000	99169.0078	-626299.8750
1295	-607700.0000	100000.0078	-626299.8750
1300	-607700.0000	101000.0078	-626299.8750

INPUT LISTING

1330	-607700.0000	101000.0078	-625994.8750
1340	-607700.0000	101000.0078	-624184.8750
1350	-607700.0000	101000.0078	-623879.8750
1355	-606975.0000	101000.0078	-623879.8750
1360	-606025.0000	101000.0078	-623879.8750
410	-605242.0000	98338.0078	-626299.8750
420	-607700.0000	98338.0078	-626299.8750
429	-610221.0000	98338.0078	-626299.8750
430	-612742.0000	98338.0078	-626299.8750
440	-615200.0000	98338.0078	-626299.8750
1989	-615200.0000	99169.0078	-626299.8750
1990	-615200.0000	100000.0078	-626299.8750
2000	-615200.0000	101000.0078	-626299.8750
2030	-615200.0000	101000.0078	-625994.8750
2040	-615200.0000	101000.0078	-624184.8750
2050	-615200.0000	101000.0078	-623879.8750
2060	-614475.0000	101000.0078	-623879.8750
1950	-613525.0000	101000.0078	-623879.8750
430	-612742.0000	98338.0078	-626299.8750
440	-615200.0000	98338.0078	-626299.8750
449	-617721.0000	98338.0078	-626299.8750
450	-620242.0000	98338.0078	-626299.8750
18000	-622700.0000	98338.0078	-626299.8750
1044	-622700.0000	99169.0078	-626299.8750
1045	-622700.0000	100000.0078	-626299.8750
1050	-622700.0000	101000.0078	-626299.8750

INPUT LISTING

1080	-622700.0000	101000.0078	-625994.8750
1090	-622700.0000	101000.0078	-624184.8750
1100	-622700.0000	101000.0078	-623879.8750
1105	-621975.0000	101000.0078	-623879.8750
1110	-621025.0000	101000.0078	-623879.8750
450	-620242.0000	98338.0078	-626299.8750
18000	-622700.0000	98338.0078	-626299.8750
460	-627742.0000	98338.0078	-626299.8750
16000	-630200.0000	98338.0078	-626299.8750
469	-630327.0000	98338.0078	-626299.8750
470	-630454.0000	98338.0078	-626299.8750
16000	-630200.0000	98338.0078	-626299.8750
489	-630200.0000	99169.0078	-626299.8750
490	-630200.0000	100000.0078	-626299.8750
510	-630200.0000	101000.0078	-626299.8750
540	-630200.0000	101000.0078	-625994.8750
550	-630200.0000	101000.0078	-624184.8750
560	-630200.0000	101000.0078	-623879.8750
565	-629475.0000	101000.0078	-623879.8750
570	-628525.0000	101000.0078	-623879.8750
620	-628525.0000	101000.0078	-624057.8750
630	-628525.0000	101000.0078	-625867.8750
635	-628525.0000	101000.0078	-626135.8750
14030	-628525.0000	101000.0078	-626800.8750
14025	-629638.0000	101000.0078	-626800.8750
14020	-630750.0000	101000.0078	-626800.8750

INPUT LISTING

14015	-630750.0000	102800.0078	-626800.8750
14010	-630750.0000	102800.0078	-625600.8750
707	-632200.0000	102800.0078	-625600.8750
680	-628525.0000	98170.0078	-625600.8750
750	-622700.0000	98170.0078	-625600.8750
17000	-622025.0000	98170.0078	-625600.8750
754	-621525.0000	98170.0078	-625600.8750
755	-621025.0000	98170.0078	-625600.8750
17000	-622025.0000	98170.0078	-625600.8750
4229	-622025.0000	99085.0078	-625600.8750
4230	-622025.0000	100000.0078	-625600.8750
17010	-622025.0000	101000.0078	-625600.8750
17020	-622025.0000	101000.0078	-629600.8750
17025	-621525.0000	101000.0078	-629600.8750
17030	-621025.0000	101000.0078	-629600.8750
1225	-621025.0000	101000.0078	-626135.8750
1230	-621025.0000	101000.0078	-625867.8750
1240	-621025.0000	101000.0078	-624057.8750
1110	-621025.0000	101000.0078	-623879.8750
1250	-621025.0000	101000.0078	-622751.8750
17100	-621025.0000	101610.0078	-622751.8750
17110	-621025.0000	101610.0078	-622446.8750
1260	-621025.0000	101585.0078	-622294.8750
1270	-621025.0000	101585.0078	-622008.8750
755	-621025.0000	98170.0078	-625600.8750
760	-615200.0000	98170.0078	-625600.8750

INPUT LISTING

19000	-614525.0000	98170.0078	-625600.8750
769	-614025.0000	98170.0078	-625600.8750
770	-613525.0000	98170.0078	-625600.8750
19000	-614525.0000	98170.0078	-625600.8750
4299	-614525.0000	99085.0078	-625600.8750
4300	-614525.0000	100000.0078	-625600.8750
19010	-614525.0000	101000.0078	-625600.8750
19020	-614525.0000	101000.0078	-629600.8750
19025	-614025.0000	101000.0078	-629600.8750
19030	-613525.0000	101000.0078	-629600.8750
1925	-613525.0000	101000.0078	-626135.8750
1930	-613525.0000	101000.0078	-625867.8750
1940	-613525.0000	101000.0078	-624057.8750
1950	-613525.0000	101000.0078	-623879.8750
1960	-613525.0000	101000.0078	-622751.8750
19100	-613525.0000	101610.0078	-622751.8750
19110	-613525.0000	101610.0078	-622446.8750
1970	-613525.0000	101610.0078	-622294.8750
1980	-613525.0000	101610.0078	-622005.8750
770	-613525.0000	98170.0078	-625600.8750
780	-607700.0000	98170.0078	-625600.8750
13000	-607025.0000	98170.0078	-625600.8750
789	-606525.0000	98170.0078	-625600.8750
790	-606025.0000	98170.0078	-625600.8750
13000	-607025.0000	98170.0078	-625600.8750
4399	-607025.0000	99085.0078	-625600.8750

INPUT LISTING

4400	-607025.0000	100000.0078	-625600.8750
13010	-607025.0000	101000.0078	-625600.8750
13020	-607025.0000	101000.0078	-629600.8750
13025	-606525.0000	101000.0078	-629600.8750
13030	-606025.0000	101000.0078	-629600.8750
1425	-606025.0000	101000.0078	-626135.8750
1430	-606025.0000	101000.0078	-625867.8750
1440	-606025.0000	101000.0078	-624057.8750
1360	-606025.0000	101000.0078	-623879.8750
1450	-606025.0000	101000.0078	-622751.8750
15100	-606025.0000	101613.0078	-622751.8750
15110	-606025.0000	101613.0078	-622446.8750
1460	-606025.0000	101588.0078	-622294.8750
1470	-606025.0000	101588.0078	-622008.8750
790	-606025.0000	98170.0078	-625600.8750
800	-602700.0000	98170.0078	-625600.8750
810	-597700.0000	98170.0078	-625600.8750
820	-592700.0000	98170.0078	-625600.8750
12000	-592025.0000	98170.0078	-625600.8750
829	-591875.0000	98170.0078	-625600.8750
830	-591725.0000	98170.0078	-625600.8750
12000	-592025.0000	98170.0078	-625600.8750
831	-592025.0000	99085.0078	-625600.8750
832	-592025.0000	100000.0078	-625600.8750
12010	-592025.0000	101000.0078	-625600.8750
12015	-592025.0000	101000.0078	-625905.8750

INPUT LISTING

12017	-592025.0000	101000.0078	-627905.8750
12020	-592025.0000	101000.0078	-629600.8750
12025	-591525.0000	101000.0078	-629600.8750
12030	-591025.0000	101000.0078	-629600.8750
885	-591025.0000	101000.0078	-626135.8750
890	-591025.0000	101000.0078	-625868.8750
900	-591025.0000	101000.0078	-624058.8750
910	-591025.0000	101000.0078	-623880.8750
920	-591025.0000	101000.0078	-622752.8750
15010	-591025.0000	101610.0078	-622752.8750
15020	-591025.0000	101610.0078	-622447.8750
930	-591025.0000	101585.0078	-622295.8750
940	-591025.0000	101585.0078	-622009.8750
680	-628525.0000	98170.0078	-625600.8750
14000	-629525.0000	98170.0078	-625600.8750
690	-630200.0000	98170.0078	-625600.8750
691	-631209.3750	98170.0078	-625600.8750
692	-631619.6875	98170.0078	-625600.8750
700	-632199.9375	98750.2891	-625600.8750
704	-632199.9375	99375.1484	-625600.8750
705	-632199.9375	100000.0078	-625600.8750
740	-632199.9375	100200.0078	-625600.8750
745	-632199.9375	102400.0078	-625600.8750
745	-632200.0000	102400.0078	-625600.8750
707	-632200.0000	102800.0078	-625600.8750
710	-632200.0000	106416.0078	-625600.8750

INPUT LISTING

720	-634700.0000	106416.0078	-625600.8750
730	-634700.0000	105425.0078	-625600.8750
4000	-634700.0000	104929.0078	-625600.8750
4100	-634700.0000	104929.0078	-625095.8750
4110	-634700.0000	104929.0078	-624905.8750
4120	-634700.0000	104929.0078	-620500.8750
4130	-634700.0000	104929.0078	-614000.8750
4140	-634700.0000	104929.0078	-610650.8750
7200	-635338.0000	105567.0078	-610650.8750
7210	-637951.0000	105567.0078	-610650.8750
7220	-641951.0000	105567.0078	-610650.8750
7230	-648951.0000	105567.0078	-610650.8750
7240	-655751.0000	105567.0078	-610650.8750
7600	-655751.0000	105567.0078	-610155.8750
7610	-655751.0000	105643.0078	-609545.8750
7615	-655751.0000	105643.0078	-609291.8750
7620	-655751.0000	105694.0078	-608783.8750
7650	-655751.0000	105694.0078	-607526.8750
7660	-655751.0000	105694.0078	-604000.8750
7670	-655751.0000	105694.0078	-599000.8750
7680	-655751.0000	105694.0078	-595600.8750
7690	-660751.0000	105694.0078	-595600.8750
7700	-661751.0000	105694.0078	-595600.8750
7710	-661751.0000	105694.0078	-587400.8750
7720	-660751.0000	105694.0078	-587400.8750
7730	-655751.0000	105694.0078	-587400.8750

INPUT LISTING

7740	-655751.0000	105694.0078	-584000.8750
7750	-655751.0000	105694.0078	-579000.8750
7760	-655751.0000	105694.0078	-574000.8750
7770	-655751.0000	105694.0078	-573431.8750
7780	-655751.0000	105694.0078	-569500.8750
7790	-655751.0000	105694.0078	-569000.8750
7800	-655751.0000	105694.0078	-564000.8750
7810	-655751.0000	105694.0078	-559000.8750
7820	-655751.0000	105694.0078	-554000.8750
7830	-655751.0000	105694.0078	-549000.8750
7840	-655751.0000	105694.0078	-544000.8750
7850	-655751.0000	105694.0078	-543431.8750
7860	-655751.0000	105694.0078	-539500.8750
7870	-655751.0000	105694.0078	-539000.8750
7880	-655751.0000	105694.0078	-534000.8750
7890	-655751.0000	105694.0078	-533700.8750
7240	-655751.0000	105567.0078	-610650.8750
7250	-655751.0000	105567.0078	-611145.8750
7260	-655751.0000	105643.0078	-611755.8750
7270	-655751.0000	105643.0078	-613292.8750
7280	-655751.0000	105643.0078	-614000.8750
7290	-655751.0000	105643.0078	-614569.8750
7295	-655751.0000	105643.0078	-618500.8750
7300	-655751.0000	105643.0078	-619000.8750
7320	-655751.0000	105643.0078	-624000.8750
7330	-655751.0000	105643.0078	-629000.8750

INPUT LISTING

7340	-655751.0000	105643.0078	-634000.8750
7350	-655751.0000	105643.0078	-639000.8750
7370	-655751.0000	105643.0078	-644000.8750
7373	-655751.0000	105643.0078	-644569.8750
7376	-655751.0000	105643.0078	-648500.8750
7380	-655751.0000	105643.0078	-649000.8750
7400	-655751.0000	105643.0078	-654000.8750
7410	-655751.0000	105643.0078	-657150.8750
7415	-660751.0000	105643.0078	-657150.8750
7420	-661751.0000	105643.0078	-657150.8750
7430	-661751.0000	105643.0078	-661500.8750
7440	-661751.0000	105643.0078	-665850.8750
7445	-660751.0000	105643.0078	-665850.8750
7450	-655751.0000	105643.0078	-665850.8750
7460	-655751.0000	105643.0078	-669000.8750
7480	-655751.0000	105643.0078	-674000.8750
7482	-655751.0000	105643.0078	-674569.8750
7485	-655751.0000	105643.0078	-678500.8750
7490	-655751.0000	105643.0078	-679000.8750
7500	-655751.0000	105643.0078	-679300.8750
4140	-634700.0000	104929.0078	-610650.8750
4150	-634700.0000	104929.0078	-609800.8750
4000	-634700.0000	104929.0078	-625600.8750
4005	-634700.0000	104929.0078	-626500.8750
4010	-634700.0000	104929.0078	-631000.8750
4020	-634700.0000	104929.0078	-636500.8750

INPUT LISTING

4030	-634700.0000	104929.0078	-642000.8750
4040	-634700.0000	104929.0078	-647000.8750
4050	-634700.0000	104929.0078	-655000.8750
7000	-634700.0000	104929.0078	-660500.8750
7010	-634700.0000	104929.0078	-666500.8750
7030	-634700.0000	104929.0078	-672150.8750
7040	-630200.0000	104929.0078	-672150.8750
7050	-628516.0000	104929.0078	-672150.8750
7060	-623200.0000	104929.0078	-672150.8750
7070	-621516.0000	104929.0078	-672150.8750
7080	-616200.0000	104929.0078	-672150.8750
7090	-614516.0000	104929.0078	-672150.8750
7100	-609200.0000	104929.0078	-672150.8750
7110	-609000.0000	104929.0078	-672150.8750
570	-628525.0000	101000.0078	-623879.8750
580	-628525.0000	101000.0078	-622751.8750
16010	-628525.0000	101610.0078	-622751.8750
16020	-628525.0000	101610.0078	-622446.8750
590	-628525.0000	101585.0078	-622294.8750
600	-628525.0000	101585.0078	-622008.8750
350	-598520.0000	98338.0078	-626299.8750
15000	-592700.0000	98338.0078	-626299.8750
379	-592573.0000	98338.0078	-626299.8750
380	-592446.0000	98338.0078	-626299.8750
15000	-592700.0000	98338.0078	-626299.8750
382	-592700.0000	99169.0078	-626299.8750

INPUT LISTING

383	-592700.0000	100000.0078	-626299.8750
1010	-592700.0000	101000.0078	-626299.8750
980	-592700.0000	101000.0078	-625994.8750
970	-592700.0000	101000.0078	-624184.8750
960	-592700.0000	101000.0078	-623876.8750
965	-591975.0000	101000.0078	-623876.8750
965	-591975.0000	101000.0078	-623880.8750
910	-591025.0000	101000.0078	-623880.8750
80	-599450.0000	100786.0078	-628049.8750
81	-599450.0000	100786.0078	-627449.8750
83	-599450.0000	100786.0078	-627099.8750
2200	-599450.0000	104995.0078	-627099.8750
2205	-599450.0000	104995.0078	-626149.8750
2210	-599450.0000	104995.0078	-624599.8750
2215	-596974.0000	104995.0078	-624599.8750
2220	-596974.0000	104995.0078	-626149.8750
2225	-596974.0000	104995.0078	-627099.8750
83	-599450.0000	100786.0078	-627099.8750
105	-599450.0000	100786.0078	-626858.8750
110	-599450.0000	100786.0078	-625558.8750
85	-599450.0000	100786.0078	-624999.8750
360	-598520.0000	100786.0078	-624999.8750
340	-598520.0000	100786.0078	-626299.8750
346	-598520.0000	100000.0078	-626299.8750
349	-598520.0000	99169.0078	-626299.8750
350	-598520.0000	98338.0078	-626299.8750

INPUT LISTING

2225	-596974.0000	104995.0078	-627099.8750
2300	-597259.0000	104995.0078	-627099.8750
3200	-597259.0000	105965.0078	-627099.8750
3210	-597259.0000	106493.0078	-627099.8750
3220	-597259.0000	106815.0078	-627099.8750
3240	-597259.0000	107085.0078	-627099.8750
3250	-596999.0000	107085.0078	-627099.8750
3260	-596847.0000	107085.0078	-627099.8750
3280	-596665.0000	107085.0078	-627099.8750
3290	-596163.0000	107085.0078	-627099.8750
3300	-595858.0000	107085.0078	-627099.8750
3310	-595858.0000	107085.0078	-627949.8750
3320	-596602.0000	106341.0078	-627949.8750
2300	-597259.0000	104995.0078	-627099.8750
2310	-599059.0000	104995.0078	-627099.8750
2320	-599059.0000	105965.0078	-627099.8750
2500	-599059.0000	106493.0078	-627099.8750
2504	-599059.0000	106815.0078	-627099.8750
2508	-599059.0000	107085.0078	-627099.8750
2510	-598799.0000	107085.0078	-627099.8750
2520	-598647.0000	107085.0078	-627099.8750
2540	-598466.0000	107085.0078	-627099.8750
2545	-597964.0000	107085.0078	-627099.8750
2550	-597659.0000	107085.0078	-627099.8750
2555	-597659.0000	107085.0078	-627949.8750
2555	-597660.0000	107094.0078	-627949.8750

INPUT LISTING

2560	-598413.0000	106341.0078	-627949.8750
6120	-597701.0000	106341.0078	-627949.8750
3120	-594793.0000	106341.0078	-627949.8750
3320	-596602.0000	106341.0078	-627949.8750
6120	-597699.0000	106341.0078	-627949.8750
3120	-594793.0000	106341.0078	-627949.8750
5260	-593907.0000	106341.0078	-627949.8750
6100	-592699.0000	106341.0078	-627949.8750
6110	-585199.0000	106341.0078	-627949.8750
5620	-599059.0000	106341.0078	-627949.8750
6130	-602701.0000	106341.0078	-627949.8750
2225	-596974.0000	104995.0078	-627099.8750
2240	-595460.0000	104995.0078	-627099.8750
3000	-595460.0000	105965.0078	-627099.8750
3010	-595460.0000	106493.0078	-627099.8750
3020	-595460.0000	106815.0078	-627099.8750
3040	-595460.0000	107085.0078	-627099.8750
3050	-595200.0000	107085.0078	-627099.8750
3060	-595048.0000	107085.0078	-627099.8750
3080	-594867.0000	107085.0078	-627099.8750
3090	-594365.0000	107085.0078	-627099.8750
3100	-594060.0000	107085.0078	-627099.8750
3110	-594060.0000	107085.0078	-627949.8750
3110	-594058.0000	107076.0078	-627949.8750
3120	-594793.0000	106341.0078	-627949.8750
2240	-595460.0000	104995.0078	-627099.8750

INPUT LISTING

5000	-594950.0000	104995.0078	-627099.8750
85	-599450.0000	100786.0078	-624999.8750
90	-599450.0000	100786.0078	-623298.8750
100	-599450.0000	99643.0078	-623298.8750
101	-599450.0000	97893.0078	-623298.8750
102	-599450.0000	97419.5625	-623298.8750
9100	-599450.0000	96750.0078	-622629.3125
9101	-599450.0000	96750.0078	-617495.6250
11000	-599450.0000	96750.0078	-611198.8750
11010	-599450.0000	96750.0078	-599098.8750
11020	-599450.0000	96750.0078	-586998.8750
11030	-599450.0000	96750.0078	-574898.8750
11040	-599450.0000	96750.0078	-562798.8750
11041	-599450.0000	96750.0078	-561442.8750
11042	-599450.0000	96750.0078	-560969.4375
9110	-599450.0000	97419.5625	-560299.8750
9119	-599450.0000	98531.2891	-560299.8750
9120	-599450.0000	99643.0156	-560299.8750
9130	-599450.0000	100786.0156	-560299.8750
10070	-599450.0000	100786.0156	-559156.8750
10080	-599450.0000	100786.0156	-557856.8750
9140	-599450.0000	100786.0156	-556476.8750
9150	-599450.0000	100786.0156	-555617.8750
9160	-599450.0000	100786.0156	-554499.8750
9180	-600009.0000	100786.0156	-554499.8750
9190	-600619.0000	100786.0156	-554499.8750

INPUT LISTING

9200	-601381.0000	100786.0156	-554499.8750
9210	-601381.0000	100786.0156	-553737.8750
9220	-601381.0000	100786.0156	-553340.8750
9230	-601381.0000	100786.0156	-551215.8750
9240	-601381.0000	100786.0156	-549621.8750
9250	-601381.0000	100786.0156	-548371.8750
9280	-601381.0000	100786.0156	-547515.8750
9290	-601381.0000	100786.0156	-547118.8750
9300	-601381.0000	100786.0156	-541544.8750
9310	-601381.0000	100786.0156	-535970.8750
9320	-601381.0000	100786.0156	-535573.8750
9330	-601381.0000	100786.0156	-533270.8750
9340	-600469.0000	100786.0156	-533270.8750
9345	-599790.0000	100786.0156	-533270.8750
9340	-600469.0000	100786.0156	-533270.8750
9350	-600469.0000	100786.0156	-533651.8750
9360	-600469.0000	100786.0156	-535312.8750
9370	-600469.0000	100786.0156	-542148.8750
9380	-600469.0000	100786.0156	-550148.8750
9390	-597519.0000	100786.0156	-550148.8750
9330	-601381.0000	100786.0156	-533270.8750
9335	-601381.0000	100786.0156	-532670.8750
9500	-601381.0000	100786.0156	-532489.8750
9510	-601381.0000	100786.0156	-530761.8750
9520	-601381.0000	100786.0156	-529999.8750
9530	-600619.0000	100786.0156	-529999.8750

INPUT LISTING

9550	-600009.0000	100786.0156	-529999.8750
9560	-599450.0000	100786.0156	-529999.8750
9900	-599450.0000	100786.0156	-528881.8750
10000	-600104.0000	100786.0156	-528881.8750
9900	-599450.0000	100786.0156	-528881.8750
9910	-599450.0000	100786.0156	-527642.8750
9920	-599450.0000	100786.0156	-526342.8750
9950	-599450.0000	100786.0156	-525199.8750
9960	-599450.0000	99643.0156	-525199.8750
9961	-599450.0000	98643.0156	-525199.8750
9962	-599450.0000	98169.5703	-525199.8750
10010	-599450.0000	97500.0156	-524530.3125
10011	-599450.0000	97500.0156	-519396.6250
10012	-599450.0000	97500.0156	-516097.7500
11100	-599450.0000	97500.0156	-512798.8750
11110	-599450.0000	97500.0156	-500397.8750
10020	-599450.0000	97500.0156	-500247.8750
10029	-599450.0000	97500.0156	-499998.3750
10030	-599450.0000	97500.0156	-499748.8750
9560	-599450.0000	100786.0156	-529999.8750
9580	-598891.0000	100786.0156	-529999.8750
9590	-598281.0000	100786.0156	-529999.8750
9600	-597519.0000	100786.0156	-529999.8750
9610	-597519.0000	100786.0156	-530761.8750
9620	-597519.0000	100786.0156	-532355.8750
9622	-597519.0000	100786.0156	-532555.8750

INPUT LISTING

9624	-597519.0000	100786.0156	-532755.8750
9627	-597519.0000	100786.0156	-533219.8750
9630	-597519.0000	100786.0156	-535903.8750
9640	-597519.0000	100786.0156	-536300.8750
9650	-597519.0000	100786.0156	-536700.8750
9660	-597519.0000	100786.0156	-541544.8750
9670	-597519.0000	100786.0156	-547448.8750
9680	-597519.0000	100786.0156	-547845.8750
9690	-597519.0000	100786.0156	-549548.8750
9390	-597519.0000	100786.0156	-550148.8750
9710	-597519.0000	100786.0156	-550529.8750
9720	-597519.0000	100786.0156	-552123.8750
9730	-597519.0000	100786.0156	-553335.8750
9800	-597519.0000	100786.0156	-553737.8750
9810	-597519.0000	100786.0156	-554499.8750
9820	-598281.0000	100786.0156	-554499.8750
9840	-598891.0000	100786.0156	-554499.8750
9160	-599450.0000	100786.0156	-554499.8750
2310	-599059.0000	104995.0078	-627099.8750
6000	-599202.0000	104995.0078	-627099.8750

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9	-0.065	-2.098	0.040	0.0019	0.0005	0.0042
10	-0.149	-2.101	0.063	0.0007	0.0008	0.0046
18	-0.150	-2.101	0.063	0.0007	0.0008	0.0046
19	-0.225	-2.078	0.025	-0.0070	0.0005	0.0063
20	-0.255	-1.907	-0.035	-0.0176	0.0010	0.0067
30	-0.245	-1.730	-0.035	-0.0186	0.0011	0.0069
35	-0.234	-1.545	-0.035	-0.0200	0.0011	0.0060
40	-0.208	-1.049	-0.035	-0.0238	0.0012	0.0038
50	-0.203	-0.964	-0.035	-0.0238	0.0012	0.0038
60	-0.166	-0.235	-0.035	-0.0238	0.0012	0.0037
70	-0.161	-0.149	-0.035	-0.0236	0.0012	0.0036
75	-0.154	-0.000	-0.035	-0.0194	0.0013	0.0030
80	-0.147	0.082	-0.035	-0.0147	0.0013	0.0024
81	-0.133	0.177	-0.035	-0.0077	0.0014	0.0018
83	-0.124	0.203	-0.035	-0.0045	0.0014	0.0015
85	-0.070	0.117	-0.035	0.0034	0.0016	-0.0005
89	-0.041	0.033	-0.049	0.0011	0.0009	-0.0004
90	-0.038	0.036	-0.030	-0.0032	0.0009	0.0002
100	-0.038	0.036	-0.029	-0.0032	0.0009	0.0002
101	-0.029	0.036	0.080	-0.0036	0.0006	0.0004

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
102	-0.013	0.055	0.128	-0.0026	0.0007	0.0012
105	-0.118	0.211	-0.035	-0.0027	0.0014	0.0012
110	-0.085	0.161	-0.035	0.0030	0.0015	0.0000
119	-0.188	-1.450	-0.015	-0.0125	0.0022	0.0139
120	-0.089	-1.400	0.056	-0.0050	0.0036	0.0058
125	-0.086	-1.400	0.058	-0.0050	0.0036	0.0058
149	-0.014	-1.397	0.121	-0.0036	0.0024	0.0038
150	0.030	-1.394	0.168	-0.0030	0.0012	0.0019
160	0.030	-0.960	0.094	-0.0025	0.0013	0.0105
179	0.030	-0.506	0.048	-0.0020	0.0008	0.0094
180	0.030	-0.092	0.016	-0.0016	0.0007	0.0087
182	-0.086	-0.092	0.004	-0.0002	0.0009	0.0067
183	-0.179	-0.093	0.006	0.0002	0.0011	0.0058
189	0.030	-0.069	0.014	-0.0016	0.0007	0.0087
190	0.030	-0.046	0.012	-0.0016	0.0007	0.0087
220	0.030	-1.234	0.172	-0.0025	-0.0005	-0.0081
229	0.030	-0.830	0.133	-0.0019	-0.0012	-0.0105
230	0.029	-0.421	0.080	-0.0013	-0.0012	-0.0083
231	0.137	-0.421	0.068	-0.0006	-0.0014	-0.0060
232	0.219	-0.422	0.056	-0.0014	-0.0016	-0.0050
240	0.029	-0.100	0.026	-0.0010	-0.0007	-0.0036
249	0.029	-0.015	0.008	-0.0007	-0.0003	-0.0013

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CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
250	0.029	0.011	0.001	-0.0004	-0.0001	-0.0004
252	0.033	0.011	-0.001	0.0000	-0.0001	-0.0001
253	0.034	0.010	0.000	0.0001	-0.0002	-0.0000
260	0.029	0.032	0.001	-0.0002	0.0001	-0.0004
269	0.029	0.044	0.004	-0.0001	0.0001	-0.0002
270	0.029	0.044	0.008	0.0000	0.0001	0.0003
272	0.023	0.044	0.012	0.0003	0.0000	0.0004
273	0.017	0.044	0.014	-0.0001	0.0000	0.0004
289	0.029	-0.003	0.011	0.0001	0.0000	0.0010
290	0.029	-0.082	0.011	0.0001	-0.0000	0.0013
292	0.011	-0.082	0.014	0.0001	0.0000	0.0011
293	-0.006	-0.083	0.014	-0.0002	0.0000	0.0010
299	0.029	-0.085	0.011	0.0001	-0.0000	0.0013
300	0.029	-0.089	0.011	0.0001	-0.0000	0.0013
338	-0.070	0.085	-0.053	-0.0050	0.0024	-0.0041
339	-0.078	0.014	-0.073	-0.0139	0.0040	-0.0103
340	-0.174	-0.518	0.065	-0.0103	-0.0005	0.0037
341	-0.167	-0.474	-0.025	-0.0218	0.0020	-0.0053
346	-0.148	-0.519	0.118	-0.0085	-0.0004	0.0054
349	-0.039	-0.521	0.214	-0.0054	-0.0002	0.0097
350	0.133	-0.523	0.277	-0.0040	0.0000	0.0140
360	-0.102	-0.135	-0.083	-0.0265	0.0043	-0.0118

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CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
379	0.131	-1.303	0.066	-0.0018	0.0028	-0.0140
380	0.131	-1.334	0.059	-0.0018	0.0028	-0.0140
382	0.266	-1.276	0.051	-0.0013	0.0019	-0.0051
383	0.286	-1.280	0.028	-0.0021	0.0010	0.0017
400	0.134	-2.136	0.184	-0.0022	-0.0020	0.0096
410	0.134	-2.003	0.097	-0.0011	-0.0017	-0.0117
420	0.135	-1.433	0.042	-0.0001	-0.0009	-0.0128
429	0.136	-0.896	0.013	0.0004	-0.0004	-0.0101
430	0.137	-0.645	0.003	0.0009	-0.0000	0.0002
440	0.138	-0.790	0.007	0.0014	0.0002	0.0022
449	0.139	-0.713	0.011	0.0011	-0.0000	-0.0036
450	0.140	-0.623	0.008	0.0009	-0.0001	0.0016
460	0.144	-0.969	-0.002	-0.0032	0.0007	0.0125
469	0.145	-1.762	0.076	-0.0051	0.0028	0.0169
470	0.145	-1.799	0.082	-0.0051	0.0028	0.0169
489	0.014	-1.729	-0.022	-0.0076	0.0086	0.0035
490	0.011	-1.733	-0.154	-0.0107	0.0143	-0.0009
509	0.014	-1.711	-0.359	-0.0201	0.0177	0.0134
510	0.055	-1.611	-0.396	-0.0370	0.0166	0.0187
540	0.056	-1.609	-0.396	-0.0370	0.0166	0.0188
550	0.579	-0.432	-0.396	-0.0374	0.0164	0.0190
559	0.625	-0.261	-0.413	-0.0341	0.0069	0.0205

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
560	0.630	-0.130	-0.419	-0.0293	-0.0034	0.0189
565	0.631	-0.000	-0.369	-0.0214	-0.0101	0.0131
570	0.631	0.152	-0.077	-0.0034	-0.0252	0.0163
578	0.294	0.110	-0.077	0.0061	-0.0214	0.0138
579	0.199	0.082	-0.066	0.0075	-0.0176	0.0122
580	0.132	0.070	-0.037	0.0076	-0.0150	0.0098
590	0.015	0.015	0.000	0.0049	-0.0057	0.0036
600	0.000	0.000	0.000	0.0000	-0.0000	0.0000
620	0.716	0.138	-0.077	-0.0039	-0.0286	0.0236
630	1.624	0.018	-0.077	-0.0037	-0.0288	0.0246
635	1.760	-0.000	-0.077	-0.0064	-0.0284	0.0356
680	-0.138	-2.884	-0.049	0.0027	-0.0007	0.0055
690	-0.138	-3.025	-0.074	0.0028	-0.0010	0.0034
691	-0.138	-3.069	-0.093	0.0029	-0.0012	0.0010
692	-0.120	-3.043	-0.094	0.0029	-0.0015	-0.0064
700	0.012	-2.997	-0.067	0.0030	-0.0017	-0.0153
704	0.071	-2.998	-0.055	0.0030	-0.0017	-0.0162
705	0.262	-2.998	-0.022	0.0031	-0.0018	-0.0189
707	1.500	-2.998	0.135	0.0034	-0.0024	-0.0323
709	3.952	-2.713	0.323	0.0037	-0.0037	-0.0591
710	4.271	-1.919	0.293	0.0037	-0.0043	-0.0681
719	3.919	-0.434	0.177	0.0040	-0.0050	-0.0679

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
720	3.122	-0.094	0.100	0.0042	-0.0054	-0.0616
730	3.111	-0.094	0.099	0.0042	-0.0054	-0.0616
740	0.329	-2.998	-0.012	0.0031	-0.0019	-0.0198
745	1.283	-2.998	0.111	0.0034	-0.0023	-0.0302
750	-0.137	-2.158	-0.018	0.0023	-0.0001	0.0071
754	-0.137	-2.025	-0.017	0.0022	-0.0000	0.0058
755	-0.137	-1.976	-0.017	0.0022	-0.0000	0.0053
760	-0.136	-1.619	-0.018	0.0019	0.0000	0.0022
769	-0.136	-1.584	-0.019	0.0018	0.0000	0.0013
770	-0.136	-1.574	-0.019	0.0018	0.0000	0.0009
780	-0.136	-1.532	-0.018	0.0016	-0.0000	0.0003
789	-0.136	-1.531	-0.017	0.0016	-0.0001	-0.0002
790	-0.136	-1.533	-0.017	0.0016	-0.0001	-0.0004
800	-0.136	-1.578	-0.014	0.0015	-0.0000	-0.0011
810	-0.135	-1.682	-0.019	0.0014	0.0002	-0.0012
820	-0.135	-1.771	-0.039	0.0014	0.0003	-0.0006
829	-0.135	-1.780	-0.043	0.0014	0.0003	-0.0006
830	-0.135	-1.782	-0.044	0.0014	0.0003	-0.0006
831	-0.125	-1.780	-0.023	0.0013	-0.0001	-0.0004
832	-0.126	-1.781	0.007	0.0028	-0.0004	0.0007
885	-0.017	-0.000	0.024	-0.0000	0.0005	-0.0031
890	-0.015	-0.010	0.024	0.0016	0.0001	-0.0041

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
900	-0.014	-0.054	0.024	0.0012	-0.0000	-0.0042
910	-0.015	-0.052	0.024	-0.0011	-0.0005	-0.0049
918	-0.021	-0.037	0.024	-0.0013	-0.0003	-0.0037
919	-0.017	-0.031	0.021	-0.0020	-0.0003	-0.0032
920	-0.007	-0.028	0.013	-0.0024	-0.0004	-0.0025
930	0.001	-0.007	0.000	-0.0020	-0.0003	-0.0011
940	0.000	-0.000	0.000	-0.0000	-0.0000	-0.0000
958	0.008	-0.313	-0.049	-0.0284	-0.0048	0.0167
959	-0.009	-0.178	-0.042	-0.0262	-0.0042	0.0168
960	-0.015	-0.079	-0.028	-0.0219	-0.0034	0.0127
965	-0.015	-0.000	-0.005	-0.0155	-0.0028	0.0053
970	0.009	-0.315	-0.050	-0.0284	-0.0048	0.0167
980	0.162	-1.208	-0.050	-0.0281	-0.0049	0.0165
1008	0.238	-1.284	-0.005	-0.0037	0.0003	0.0061
1009	0.200	-1.274	-0.027	-0.0103	-0.0021	0.0134
1010	0.162	-1.210	-0.050	-0.0280	-0.0049	0.0165
1044	0.088	-0.790	0.028	0.0023	0.0008	0.0050
1045	-0.005	-0.795	0.068	0.0030	0.0018	0.0078
1048	-0.114	-0.799	0.105	0.0028	0.0026	0.0102
1049	-0.156	-0.802	0.113	-0.0009	0.0018	0.0142
1050	-0.174	-0.778	0.107	-0.0164	0.0016	0.0157
1080	-0.174	-0.778	0.107	-0.0165	0.0016	0.0158

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1090	-0.123	-0.250	0.107	-0.0169	0.0016	0.0158
1099	-0.117	-0.156	0.105	-0.0168	0.0018	0.0160
1100	-0.114	-0.073	0.097	-0.0140	0.0021	0.0121
1105	-0.114	-0.000	0.081	-0.0099	0.0024	0.0046
1110	-0.114	-0.060	0.031	-0.0005	0.0038	-0.0052
1225	-0.283	-0.000	0.031	0.0001	0.0047	-0.0029
1230	-0.262	-0.010	0.031	0.0017	0.0043	-0.0042
1240	-0.127	-0.061	0.031	0.0014	0.0043	-0.0043
1248	-0.061	-0.047	0.031	-0.0016	0.0034	-0.0042
1249	-0.043	-0.039	0.027	-0.0025	0.0028	-0.0037
1250	-0.027	-0.035	0.017	-0.0031	0.0024	-0.0030
1260	-0.002	-0.008	0.000	-0.0025	0.0009	-0.0012
1270	-0.000	-0.000	0.000	-0.0000	0.0000	-0.0000
1294	0.258	-1.437	0.043	-0.0001	-0.0008	-0.0046
1295	0.274	-1.441	0.033	-0.0017	-0.0007	0.0018
1298	0.224	-1.444	0.000	-0.0041	-0.0006	0.0064
1299	0.183	-1.432	-0.027	-0.0127	-0.0026	0.0138
1300	0.144	-1.355	-0.053	-0.0319	-0.0045	0.0169
1330	0.144	-1.354	-0.053	-0.0320	-0.0045	0.0169
1340	0.001	-0.337	-0.053	-0.0323	-0.0045	0.0170
1349	-0.015	-0.188	-0.047	-0.0295	-0.0041	0.0171
1350	-0.021	-0.082	-0.033	-0.0247	-0.0034	0.0132

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1355	-0.021	-0.000	-0.009	-0.0176	-0.0028	0.0056
1360	-0.021	-0.049	0.021	-0.0014	-0.0005	-0.0049
1425	-0.019	-0.000	0.021	0.0000	0.0004	-0.0032
1430	-0.018	-0.010	0.021	0.0015	-0.0000	-0.0042
1440	-0.020	-0.052	0.021	0.0011	-0.0001	-0.0043
1448	-0.026	-0.033	0.021	-0.0013	-0.0002	-0.0038
1449	-0.021	-0.028	0.018	-0.0017	-0.0001	-0.0034
1450	-0.010	-0.025	0.011	-0.0021	-0.0001	-0.0027
1460	0.000	-0.006	0.000	-0.0018	-0.0001	-0.0012
1470	-0.000	-0.000	0.000	-0.0000	-0.0000	-0.0000
1499	-0.262	-0.091	0.002	-0.0019	0.0015	0.0050
1500	-0.263	-0.080	-0.001	-0.0033	0.0018	0.0048
1510	-0.083	-1.502	-0.001	0.0114	0.0017	0.0025
1550	-0.000	-0.000	-0.000	-0.0000	0.0000	0.0000
1598	0.276	-0.421	0.031	-0.0032	-0.0017	-0.0048
1599	0.290	-0.412	0.012	-0.0075	-0.0019	-0.0044
1600	0.289	-0.375	-0.002	-0.0113	-0.0021	-0.0042
1610	0.088	-1.347	-0.001	0.0125	-0.0018	-0.0022
1650	0.000	-0.000	-0.000	-0.0000	-0.0000	-0.0000
1698	0.034	0.010	0.001	-0.0000	-0.0002	-0.0000
1699	0.034	0.011	0.001	-0.0005	-0.0002	-0.0000
1700	0.033	0.014	-0.000	-0.0009	-0.0002	0.0000

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1710	0.011	-1.552	-0.000	0.0111	-0.0002	0.0000
1750	0.000	-0.000	-0.000	-0.0000	-0.0000	0.0000
1798	0.012	0.045	0.009	-0.0008	-0.0000	0.0004
1799	0.011	0.048	0.003	-0.0023	-0.0000	0.0004
1800	0.010	0.058	-0.001	-0.0020	-0.0000	0.0004
1810	0.004	-1.333	-0.000	0.0171	-0.0001	0.0002
1850	0.000	-0.000	-0.000	-0.0000	-0.0000	0.0000
1925	-0.198	-0.000	0.033	0.0003	0.0030	-0.0037
1930	-0.185	-0.011	0.033	0.0019	0.0028	-0.0048
1940	-0.098	-0.065	0.033	0.0015	0.0027	-0.0049
1950	-0.090	-0.064	0.033	-0.0005	0.0025	-0.0056
1958	-0.054	-0.050	0.033	-0.0017	0.0023	-0.0045
1959	-0.040	-0.041	0.030	-0.0026	0.0019	-0.0040
1960	-0.023	-0.037	0.018	-0.0032	0.0016	-0.0032
1970	-0.002	-0.009	0.000	-0.0027	0.0006	-0.0013
1980	-0.000	-0.000	0.000	-0.0000	0.0000	-0.0000
1989	0.089	-0.794	0.033	0.0020	0.0012	0.0046
1990	0.004	-0.799	0.065	0.0023	0.0021	0.0072
1998	-0.098	-0.803	0.092	0.0020	0.0029	0.0096
1999	-0.138	-0.805	0.098	-0.0014	0.0021	0.0138
2000	-0.154	-0.780	0.091	-0.0166	0.0017	0.0154
2030	-0.154	-0.779	0.091	-0.0166	0.0017	0.0154

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2040	-0.099	-0.247	0.091	-0.0170	0.0017	0.0155
2049	-0.093	-0.153	0.088	-0.0169	0.0017	0.0156
2050	-0.090	-0.071	0.082	-0.0141	0.0018	0.0118
2060	-0.090	-0.000	0.069	-0.0099	0.0019	0.0044
2098	-0.018	-0.083	0.009	-0.0008	0.0001	0.0010
2099	-0.021	-0.080	0.003	-0.0021	0.0001	0.0009
2100	-0.022	-0.070	-0.001	-0.0031	0.0001	0.0009
2110	-0.007	-1.508	-0.000	0.0114	0.0001	0.0005
2150	-0.000	-0.000	-0.000	-0.0000	0.0000	0.0000
2199	-0.516	0.204	-0.465	0.0015	0.0023	0.0051
2200	-0.514	0.190	-0.461	0.0097	0.0030	0.0045
2205	-0.474	-0.000	-0.461	0.0241	0.0035	0.0032
2210	-0.333	-1.039	-0.501	0.0438	0.0122	0.0012
2211	-0.345	-0.988	-0.471	0.0443	0.0092	0.0004
2214	-0.349	-0.739	-1.026	0.0391	0.0131	0.0105
2215	-0.385	-0.621	-1.041	0.0353	0.0118	0.0090
2220	-0.627	-0.000	-1.041	0.0111	0.0089	0.0052
2225	-0.748	0.017	-1.041	-0.0005	0.0055	0.0025
2240	-0.748	-0.000	-1.175	0.0064	0.0046	-0.0026
2300	-0.748	-0.000	-1.016	0.0016	0.0046	0.0029
2310	-0.748	-0.000	-0.918	0.0068	0.0023	-0.0038
2320	-0.510	-0.009	-0.604	0.0323	0.0005	-0.0251

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2500	-0.277	-0.009	-0.305	0.0327	0.0005	-0.0254
2504	-0.110	-0.011	-0.086	0.0455	-0.0001	-0.0342
2508	0.051	-0.011	0.129	0.0458	-0.0001	-0.0343
2510	0.051	-0.167	0.129	0.0459	-0.0001	-0.0343
2520	0.051	-0.257	0.130	0.0474	-0.0003	-0.0331
2540	0.051	-0.362	0.131	0.0480	-0.0003	-0.0323
2545	0.051	-0.644	0.133	0.0480	-0.0003	-0.0321
2548	0.089	-0.307	0.150	0.0486	-0.0047	-0.0251
2549	0.084	-0.129	0.103	0.0298	-0.0054	-0.0200
2550	0.067	-0.516	0.145	0.0497	-0.0044	-0.0250
2551	0.053	-0.671	0.138	0.0507	-0.0022	-0.0254
2555	0.052	-0.054	0.044	0.0115	0.0022	-0.0085
2560	0.000	-0.000	0.000	0.0000	0.0000	-0.0000
3000	-0.532	-0.009	-0.799	0.0380	-0.0023	-0.0242
3010	-0.308	-0.009	-0.447	0.0383	-0.0024	-0.0245
3020	-0.142	-0.011	-0.202	0.0487	-0.0047	-0.0347
3040	0.022	-0.011	0.028	0.0489	-0.0048	-0.0349
3050	0.022	-0.170	0.049	0.0490	-0.0048	-0.0349
3060	0.022	-0.262	0.062	0.0501	-0.0049	-0.0337
3080	0.022	-0.368	0.078	0.0505	-0.0050	-0.0329
3090	0.022	-0.656	0.121	0.0505	-0.0050	-0.0328
3099	0.030	-0.681	0.141	0.0529	-0.0056	-0.0258

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Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
3100	0.052	-0.521	0.150	0.0511	-0.0064	-0.0256
3108	0.080	-0.306	0.150	0.0499	-0.0065	-0.0255
3109	0.080	-0.125	0.101	0.0301	-0.0062	-0.0202
3110	0.048	-0.050	0.041	0.0111	0.0019	-0.0082
3120	0.000	0.000	-0.000	0.0000	0.0000	0.0000
3200	-0.554	-0.009	-0.720	0.0341	-0.0018	-0.0256
3210	-0.316	-0.009	-0.404	0.0346	-0.0018	-0.0259
3220	-0.146	-0.011	-0.175	0.0470	-0.0040	-0.0348
3240	0.018	-0.011	0.047	0.0473	-0.0040	-0.0349
3250	0.018	-0.170	0.066	0.0474	-0.0040	-0.0349
3260	0.018	-0.261	0.076	0.0487	-0.0042	-0.0336
3280	0.018	-0.368	0.090	0.0492	-0.0042	-0.0327
3290	0.018	-0.654	0.127	0.0493	-0.0043	-0.0326
3299	0.026	-0.680	0.145	0.0520	-0.0055	-0.0255
3300	0.050	-0.521	0.154	0.0507	-0.0068	-0.0251
3309	0.081	-0.127	0.105	0.0303	-0.0066	-0.0200
3310	0.050	-0.052	0.044	0.0113	0.0018	-0.0083
3320	-0.000	-0.000	0.000	0.0000	0.0000	-0.0000
4000	2.585	-0.092	0.062	0.0043	-0.0056	-0.0599
4005	2.671	-0.000	0.062	0.0036	-0.0054	-0.0585
4010	3.044	-0.000	0.062	-0.0013	-0.0042	-0.0511
4020	3.388	-0.000	0.062	0.0001	-0.0030	-0.0421

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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
4030	3.635	-0.000	0.062	0.0007	-0.0022	-0.0330
4040	3.800	-0.000	0.062	-0.0022	-0.0016	-0.0248
4050	4.000	-0.000	0.062	0.0017	-0.0013	-0.0117
4100	2.534	-0.127	0.062	0.0032	-0.0059	-0.0586
4110	2.514	-0.137	0.062	0.0028	-0.0060	-0.0581
4120	2.000	-0.000	0.062	-0.0028	-0.0069	-0.0462
4130	1.245	-0.000	0.062	0.0070	-0.0064	-0.0287
4140	0.881	-0.729	0.062	0.0138	-0.0061	-0.0197
4150	0.791	-0.935	0.062	0.0138	-0.0061	-0.0197
4229	-0.227	-2.079	0.013	0.0021	0.0004	0.0053
4230	-0.314	-2.080	0.058	0.0039	0.0008	0.0060
4299	-0.161	-1.598	0.008	0.0018	0.0004	0.0017
4300	-0.195	-1.599	0.043	0.0028	0.0007	0.0027
4399	-0.134	-1.532	0.000	0.0010	-0.0004	-0.0000
4400	-0.139	-1.533	0.019	0.0017	-0.0008	0.0009
5000	-0.748	-0.026	-1.216	0.0064	0.0046	-0.0029
5260	0.000	0.031	-0.000	0.0000	0.0000	0.0013
5495	-0.147	-0.093	-0.064	-0.0175	0.0031	-0.0237
5500	-0.178	-0.450	-0.102	-0.0111	0.0069	-0.0289
5501	-0.155	-0.334	-0.092	-0.0198	0.0055	-0.0321
5510	-0.179	-0.451	-0.102	-0.0111	0.0069	-0.0289
5520	-0.276	-0.603	-0.102	-0.0105	0.0070	-0.0287

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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
5530	-0.492	-0.254	-0.102	0.0241	0.0056	-0.0165
5540	-0.506	-0.195	-0.102	0.0241	0.0056	-0.0164
5550	-0.516	-0.148	-0.102	0.0242	0.0054	-0.0157
5559	-0.521	-0.021	-0.070	0.0170	0.0045	-0.0132
5560	-0.488	-0.000	-0.029	0.0046	0.0050	-0.0082
5570	-0.487	-0.000	-0.029	0.0046	0.0050	-0.0082
5580	-0.353	-0.000	0.045	0.0043	0.0049	-0.0081
5590	-0.325	-0.001	0.058	0.0034	0.0046	-0.0076
5595	0.041	-0.007	0.062	-0.0022	0.0014	-0.0053
5599	0.166	-0.001	0.001	-0.0024	-0.0002	-0.0051
5600	0.172	0.005	-0.003	0.0013	-0.0019	-0.0047
5605	0.163	-0.000	-0.003	0.0018	-0.0021	-0.0048
5609	0.033	-0.037	-0.002	-0.0022	-0.0012	-0.0057
5610	0.014	-0.015	0.000	-0.0007	-0.0007	-0.0022
5620	0.000	-0.000	0.000	-0.0000	-0.0000	0.0000
6000	-0.748	0.009	-0.913	0.0068	0.0023	-0.0038
6100	0.000	-0.000	-0.000	0.0000	0.0000	-0.0092
6110	0.000	-0.000	-0.000	0.0000	0.0000	0.0293
6120	0.000	-0.000	-0.000	0.0000	0.0000	-0.0000
6130	0.000	-0.000	-0.000	-0.0000	-0.0000	-0.0030
7000	4.128	-0.000	0.062	0.0009	-0.0013	-0.0027
7010	4.267	-0.000	0.062	-0.0068	-0.0013	0.0072

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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7030	4.399	-1.010	0.085	-0.0124	-0.0013	0.0183
7031	4.392	-1.163	0.069	-0.0130	-0.0013	0.0165
7032	4.376	-1.078	0.062	-0.0142	-0.0013	0.0148
7040	4.399	-0.000	0.167	-0.0124	-0.0013	0.0092
7050	4.399	0.116	0.206	-0.0124	-0.0013	0.0011
7060	4.399	-0.000	0.330	-0.0124	-0.0013	-0.0020
7070	4.399	-0.078	0.369	-0.0124	-0.0013	-0.0020
7080	4.399	-0.000	0.493	-0.0124	-0.0013	-0.0007
7090	4.399	-0.088	0.532	-0.0124	-0.0013	-0.0032
7100	4.399	-0.000	0.655	-0.0124	-0.0013	0.0050
7110	4.399	0.017	0.660	-0.0124	-0.0013	0.0050
7199	1.063	-0.515	0.124	0.0131	-0.0060	-0.0163
7200	1.084	-0.415	0.102	0.0128	-0.0060	-0.0138
7210	1.084	-0.000	-0.125	0.0111	-0.0058	-0.0061
7220	1.084	-0.000	-0.515	0.0081	-0.0054	0.0027
7230	1.084	-0.000	-1.132	0.0028	-0.0047	0.0007
7240	1.084	-0.086	-1.651	-0.0023	-0.0040	-0.0039
7250	1.118	-0.105	-1.651	-0.0012	-0.0040	-0.0039
7260	1.166	-0.109	-1.651	0.0020	-0.0039	-0.0039
7270	1.270	-0.052	-1.651	0.0022	-0.0039	-0.0039
7280	1.317	-0.000	-1.651	0.0023	-0.0037	-0.0041
7290	1.353	0.010	-1.651	0.0006	-0.0036	-0.0042

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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7295	1.569	-0.001	-1.651	0.0001	-0.0027	-0.0048
7300	1.592	-0.000	-1.651	-0.0006	-0.0026	-0.0049
7320	1.782	-0.000	-1.651	0.0001	-0.0017	-0.0056
7330	1.902	-0.000	-1.651	-0.0000	-0.0010	-0.0064
7340	1.969	-0.000	-1.651	-0.0000	-0.0005	-0.0072
7350	2.000	-0.000	-1.651	0.0002	-0.0002	-0.0080
7370	2.011	-0.000	-1.651	-0.0007	-0.0000	-0.0088
7373	2.011	-0.017	-1.651	-0.0018	-0.0000	-0.0089
7376	2.009	-0.027	-1.651	0.0027	0.0001	-0.0095
7380	2.008	-0.000	-1.651	0.0029	0.0001	-0.0096
7400	2.000	-0.000	-1.651	-0.0113	0.0001	-0.0104
7409	1.994	-1.013	-1.651	-0.0255	0.0001	-0.0107
7410	1.994	-1.009	-1.650	-0.0258	0.0001	-0.0118
7415	1.994	-0.000	-1.641	-0.0282	0.0001	-0.0109
7419	1.994	-0.005	-1.640	-0.0289	0.0001	-0.0066
7420	1.993	-0.248	-1.640	-0.0263	0.0001	-0.0067
7430	1.986	-1.218	-1.640	-0.0000	0.0001	-0.0067
7438	1.979	-0.247	-1.640	0.0264	0.0001	-0.0068
7439	1.978	-0.003	-1.640	0.0290	0.0001	-0.0067
7440	1.978	0.041	-1.641	0.0285	0.0001	-0.0101
7445	1.978	-0.000	-1.641	0.0284	0.0001	-0.0111
7449	1.977	-1.037	-1.651	0.0260	0.0001	-0.0113

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Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7450	1.976	-0.840	-1.651	0.0243	0.0001	-0.0115
7460	1.972	-0.000	-1.651	0.0118	0.0001	-0.0115
7480	1.962	-0.000	-1.651	-0.0039	0.0001	-0.0115
7482	1.961	-0.044	-1.651	-0.0040	0.0001	-0.0115
7485	1.954	-0.043	-1.651	0.0044	0.0001	-0.0115
7490	1.953	-0.000	-1.651	0.0047	0.0001	-0.0115
7500	1.952	0.024	-1.651	0.0047	0.0001	-0.0115
7600	1.049	-0.056	-1.651	-0.0030	-0.0040	-0.0039
7610	1.011	-0.013	-1.656	-0.0021	-0.0040	-0.0041
7615	0.993	-0.000	-1.656	-0.0004	-0.0040	-0.0043
7620	0.962	-0.029	-1.653	0.0043	-0.0040	-0.0047
7650	0.873	-0.124	-1.653	0.0043	-0.0040	-0.0047
7660	0.630	-0.000	-1.653	-0.0059	-0.0039	-0.0089
7670	0.300	-0.000	-1.653	0.0195	-0.0037	-0.0148
7679	0.096	-1.932	-1.664	0.0419	-0.0036	-0.0188
7680	0.085	-1.915	-1.691	0.0415	-0.0035	-0.0210
7690	0.085	-0.000	-1.954	0.0407	-0.0034	-0.0218
7699	0.074	0.137	-2.002	0.0406	-0.0033	-0.0166
7700	0.050	-0.113	-2.012	0.0374	-0.0033	-0.0168
7708	-0.334	-0.117	-2.012	-0.0375	-0.0030	-0.0167
7709	-0.357	0.134	-2.002	-0.0409	-0.0030	-0.0165
7710	-0.366	0.134	-1.980	-0.0410	-0.0030	-0.0194

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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7720	-0.366	-0.000	-1.960	-0.0411	-0.0030	-0.0216
7728	-0.366	-1.940	-1.737	-0.0427	-0.0028	-0.0225
7729	-0.375	-1.968	-1.716	-0.0430	-0.0028	-0.0213
7730	-0.396	-1.711	-1.707	-0.0422	-0.0028	-0.0213
7740	-0.529	-0.000	-1.707	-0.0198	-0.0027	-0.0213
7750	-0.760	-0.000	-1.707	0.0051	-0.0026	-0.0213
7760	-0.980	-0.000	-1.707	-0.0013	-0.0025	-0.0213
7770	-1.005	-0.000	-1.707	0.0005	-0.0025	-0.0213
7780	-1.173	-0.005	-1.707	-0.0008	-0.0024	-0.0213
7790	-1.194	-0.000	-1.707	0.0003	-0.0024	-0.0213
7800	-1.401	-0.000	-1.707	-0.0001	-0.0023	-0.0213
7810	-1.603	-0.000	-1.707	0.0000	-0.0023	-0.0213
7820	-1.802	-0.000	-1.707	-0.0000	-0.0023	-0.0213
7830	-2.000	-0.000	-1.707	0.0001	-0.0023	-0.0213
7840	-2.197	-0.000	-1.707	-0.0003	-0.0023	-0.0213
7850	-2.220	-0.007	-1.707	0.0009	-0.0023	-0.0213
7860	-2.375	0.000	-1.707	-0.0004	-0.0023	-0.0213
7870	-2.395	-0.000	-1.707	0.0013	-0.0023	-0.0213
7880	-2.592	-0.000	-1.707	-0.0049	-0.0023	-0.0213
7890	-2.604	0.026	-1.707	-0.0049	-0.0023	-0.0213
8000	-0.020	-0.031	-0.000	-0.0024	0.0002	0.0008
8010	-0.018	0.008	-0.000	-0.0022	0.0002	0.0008

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
8020	-0.017	-0.000	-0.000	0.0073	0.0002	0.0008
8100	0.009	0.068	-0.001	0.0021	-0.0001	0.0003
8110	0.009	0.030	-0.001	0.0027	-0.0001	0.0003
8120	0.008	-0.000	-0.001	0.0090	-0.0001	0.0003
8200	0.030	0.023	-0.000	-0.0000	-0.0002	0.0000
8210	0.026	0.022	-0.000	0.0002	-0.0002	0.0000
8220	0.025	-0.000	-0.000	0.0095	-0.0002	0.0000
8300	0.263	-0.230	-0.002	-0.0114	-0.0022	-0.0039
8310	0.227	-0.043	-0.002	-0.0111	-0.0022	-0.0039
8320	0.214	-0.000	-0.002	-0.0004	-0.0022	-0.0037
8400	-0.240	-0.039	-0.001	-0.0028	0.0019	0.0044
8410	-0.209	0.006	-0.001	-0.0025	0.0019	0.0044
8420	-0.197	-0.000	-0.001	0.0071	0.0019	0.0042
9100	0.002	0.070	0.138	0.0009	0.0003	0.0013
9101	0.010	-0.191	0.140	0.0067	-0.0000	0.0023
9110	-0.100	-0.726	-0.158	-0.0117	0.0026	0.0155
9119	-0.273	-0.726	-0.284	-0.0114	0.0027	0.0157
9120	-0.581	-0.726	-0.500	-0.0113	0.0028	0.0161
9129	-0.816	-0.654	-0.668	-0.0129	0.0020	0.0191
9130	-0.907	-0.466	-0.745	-0.0121	0.0016	0.0200
9140	-0.829	-0.005	-0.744	-0.0026	0.0018	0.0217
9150	-0.803	-0.000	-0.744	0.0053	0.0018	0.0222

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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9160	-0.766	-0.245	-0.743	0.0125	0.0019	0.0229
9180	-0.766	-0.490	-0.724	0.0129	0.0020	0.0249
9190	-0.766	-0.780	-0.700	0.0139	0.0022	0.0270
9199	-0.754	-1.161	-0.672	0.0163	0.0033	0.0338
9200	-0.723	-1.406	-0.659	0.0036	0.0031	0.0281
9210	-0.723	-1.407	-0.659	0.0035	0.0031	0.0280
9220	-0.701	-1.431	-0.659	0.0034	0.0031	0.0279
9230	-0.588	-1.161	-0.658	-0.0219	0.0030	0.0183
9240	-0.506	-0.534	-0.658	-0.0229	0.0029	0.0179
9250	-0.443	-0.000	-0.658	-0.0170	0.0029	0.0123
9280	-0.401	0.156	-0.657	-0.0072	0.0028	0.0084
9290	-0.381	0.205	-0.657	-0.0071	0.0028	0.0083
9300	-0.126	-0.000	-0.655	0.0147	0.0025	-0.0170
9310	0.103	-1.148	-0.653	-0.0116	0.0023	-0.0423
9320	0.119	-1.066	-0.653	-0.0118	0.0023	-0.0424
9330	0.208	-0.249	-0.652	-0.0221	0.0022	-0.0528
9335	0.231	-0.000	-0.652	-0.0151	0.0021	-0.0459
9340	0.208	-1.185	-0.688	-0.0231	0.0024	-0.0563
9345	0.208	-1.854	-0.716	-0.0231	0.0024	-0.0564
9350	0.192	-1.354	-0.688	-0.0222	0.0024	-0.0539
9360	0.122	-1.986	-0.688	-0.0210	0.0024	-0.0533
9370	-0.215	-0.000	-0.688	0.0058	0.0031	-0.0098

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9378	-0.600	-2.792	-0.688	-0.0190	0.0029	0.0362
9379	-0.625	-2.752	-0.698	-0.0068	0.0024	0.0448
9380	-0.634	-2.269	-0.719	-0.0015	0.0020	0.0587
9390	-0.634	-0.044	-0.793	-0.0015	0.0019	0.0514
9500	0.237	0.033	-0.652	-0.0119	0.0021	-0.0438
9510	0.299	0.376	-0.652	-0.0113	0.0020	-0.0428
9519	0.314	0.303	-0.657	-0.0069	0.0012	-0.0351
9520	0.318	0.110	-0.669	-0.0089	0.0016	-0.0126
9530	0.318	0.108	-0.669	-0.0088	0.0016	-0.0126
9550	0.318	-0.008	-0.686	-0.0065	0.0018	-0.0110
9560	0.318	-0.107	-0.703	-0.0055	0.0019	-0.0108
9580	0.318	-0.216	-0.723	-0.0052	0.0020	-0.0108
9590	0.318	-0.332	-0.746	-0.0045	0.0022	-0.0103
9599	0.306	-0.393	-0.774	0.0006	0.0033	-0.0002
9600	0.274	-0.328	-0.788	0.0102	0.0033	0.0053
9610	0.274	-0.327	-0.788	0.0102	0.0033	0.0053
9620	0.183	-0.040	-0.788	0.0099	0.0032	0.0055
9622	0.172	-0.000	-0.788	0.0063	0.0032	0.0061
9624	0.161	0.008	-0.788	0.0025	0.0032	0.0066
9627	0.135	0.026	-0.788	0.0021	0.0032	0.0067
9630	-0.012	-0.317	-0.789	-0.0069	0.0030	0.0141
9640	-0.033	-0.365	-0.789	-0.0068	0.0030	0.0142

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9650	-0.054	-0.406	-0.789	-0.0046	0.0030	0.0153
9660	-0.292	-0.000	-0.791	0.0006	0.0026	0.0287
9670	-0.538	-0.265	-0.793	0.0077	0.0021	0.0450
9680	-0.553	-0.211	-0.793	0.0077	0.0021	0.0450
9690	-0.614	-0.000	-0.793	0.0009	0.0020	0.0497
9710	-0.647	-0.062	-0.793	0.0002	0.0019	0.0474
9720	-0.699	-0.047	-0.794	0.0011	0.0019	0.0465
9730	-0.737	0.128	-0.794	0.0121	0.0017	0.0336
9800	-0.749	0.214	-0.794	0.0122	0.0017	0.0334
9809	-0.762	0.273	-0.789	0.0187	0.0011	0.0249
9810	-0.766	0.162	-0.778	0.0162	0.0016	0.0201
9820	-0.766	0.159	-0.778	0.0162	0.0016	0.0201
9840	-0.766	-0.044	-0.761	0.0136	0.0018	0.0212
9900	0.355	-0.000	-0.703	-0.0023	0.0018	-0.0106
9910	0.394	-0.022	-0.703	0.0018	0.0018	-0.0105
9920	0.434	-0.089	-0.702	0.0027	0.0017	-0.0103
9950	0.265	-0.094	-0.659	-0.0047	0.0016	-0.0098
9951	0.397	-0.109	-0.705	-0.0010	0.0016	-0.0102
9960	0.263	-0.094	-0.658	-0.0048	0.0016	-0.0098
9961	0.092	-0.094	-0.571	-0.0049	0.0016	-0.0098
9962	-0.035	-0.065	-0.501	-0.0044	0.0015	-0.0097
10000	0.355	0.119	-0.682	-0.0023	0.0018	-0.0105

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10010	-0.074	-0.022	-0.480	-0.0010	0.0009	-0.0098
10011	-0.018	-0.177	-0.479	0.0067	0.0005	-0.0098
10012	0.001	-0.838	-0.479	0.0170	0.0002	-0.0098
10020	0.001	-2.171	-0.478	-0.0333	-0.0001	-0.0098
10029	0.001	-2.026	-0.478	-0.0333	-0.0001	-0.0098
10030	0.001	-1.881	-0.478	-0.0333	-0.0001	-0.0098
10070	-0.907	-0.463	-0.745	-0.0121	0.0016	0.0200
10080	-0.871	-0.193	-0.745	-0.0098	0.0017	0.0208
10100	-0.020	-2.097	0.015	0.0027	0.0004	0.0040
10110	-0.249	-0.968	-0.160	-0.0092	0.0025	-0.0173
10111	-0.073	-0.450	-0.162	-0.0007	0.0015	-0.0150
10112	-0.007	-0.766	-0.164	0.0111	0.0007	-0.0133
10120	0.870	-1.183	-0.700	-0.0090	0.0016	-0.0224
10121	0.076	-1.181	-0.367	-0.0093	0.0016	-0.0210
10122	-0.184	-1.118	-0.223	-0.0108	0.0024	-0.0180
10130	2.952	-1.179	-1.467	-0.0090	0.0016	-0.0265
10135	2.952	-0.000	-1.391	-0.0090	0.0016	-0.0149
10140	2.952	-0.000	-1.196	-0.0090	0.0016	0.0038
10150	2.952	-0.111	-1.050	-0.0090	0.0016	-0.0033
10160	2.952	-0.000	-1.001	-0.0090	0.0016	-0.0013
10170	2.952	-0.028	-0.855	-0.0090	0.0016	-0.0012
10180	2.952	-0.000	-0.806	-0.0090	0.0016	0.0018

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10190	2.952	-0.181	-0.660	-0.0090	0.0016	-0.0039
10200	2.952	-0.000	-0.611	-0.0090	0.0016	-0.0063
10210	2.952	0.027	-0.604	-0.0090	0.0016	-0.0063
10250	0.909	-1.183	-0.715	-0.0090	0.0016	-0.0225
10260	1.432	-1.184	-0.920	-0.0090	0.0016	-0.0236
10300	2.952	-1.438	-1.483	-0.0090	0.0016	-0.0265
11000	0.004	-1.637	0.142	0.0202	-0.0001	0.0036
11010	-0.000	-2.825	0.147	-0.0013	0.0000	0.0061
11020	0.000	-2.673	0.152	-0.0002	-0.0000	0.0086
11030	-0.013	-2.924	0.157	0.0034	-0.0001	0.0111
11040	0.086	-1.755	0.162	-0.0269	0.0017	0.0137
11041	0.133	-1.127	0.163	-0.0258	0.0021	0.0139
11042	0.089	-0.816	0.043	-0.0179	0.0029	0.0140
11100	0.007	-2.146	-0.478	0.0279	0.0001	-0.0098
11110	0.001	-2.259	-0.478	-0.0333	-0.0001	-0.0098
11200	0.018	-1.868	-0.165	0.0224	0.0002	-0.0115
11210	0.002	-1.806	-0.170	-0.0226	-0.0002	-0.0052
11211	-0.009	-0.568	-0.172	-0.0074	-0.0001	-0.0030
11212	-0.010	-0.641	-0.174	0.0085	0.0001	-0.0008
11213	0.016	-1.823	-0.176	0.0162	0.0006	0.0015
11214	0.018	-2.041	-0.091	0.0122	0.0008	0.0020
12000	-0.135	-1.779	-0.042	0.0014	0.0003	-0.0006

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DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
12008	-0.143	-1.781	0.051	0.0048	-0.0007	0.0021
12009	-0.152	-1.771	0.073	0.0075	-0.0006	0.0034
12010	-0.156	-1.737	0.086	0.0112	-0.0005	0.0042
12015	-0.156	-1.736	0.086	0.0112	-0.0005	0.0042
12017	-0.145	-1.049	0.086	0.0287	0.0002	0.0100
12018	-0.165	-0.275	0.086	0.0318	0.0017	0.0141
12019	-0.173	-0.138	0.082	0.0282	0.0027	0.0140
12020	-0.178	-0.044	0.070	0.0250	0.0035	0.0127
12025	-0.178	-0.000	0.058	0.0227	0.0037	0.0120
12029	-0.172	0.048	0.031	0.0174	0.0039	0.0098
12030	-0.158	0.007	0.025	0.0120	0.0038	0.0097
13000	-0.136	-1.531	-0.018	0.0016	-0.0001	0.0000
13008	-0.157	-1.534	0.047	0.0031	-0.0011	0.0021
13009	-0.165	-1.527	0.062	0.0051	-0.0010	0.0033
13010	-0.167	-1.503	0.071	0.0082	-0.0009	0.0040
13018	-0.147	-0.251	0.070	0.0287	0.0011	0.0130
13019	-0.153	-0.126	0.068	0.0257	0.0020	0.0129
13020	-0.156	-0.040	0.059	0.0228	0.0028	0.0116
13025	-0.156	-0.000	0.049	0.0208	0.0029	0.0109
13029	-0.151	0.042	0.026	0.0161	0.0032	0.0088
13030	-0.139	0.004	0.021	0.0112	0.0032	0.0086
14000	-0.138	-2.976	-0.063	0.0028	-0.0009	0.0045

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Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
14008	1.426	-3.447	0.016	0.0213	0.0160	-0.0043
14009	1.482	-3.509	0.038	0.0168	0.0125	-0.0090
14010	1.499	-3.485	0.076	0.0131	0.0077	-0.0168
14013	1.230	-3.098	-0.094	0.0187	0.0104	0.0164
14014	1.204	-3.131	-0.018	0.0214	0.0135	0.0083
14015	1.253	-3.215	0.016	0.0226	0.0166	0.0038
14019	1.963	-3.016	-0.453	0.0067	-0.0001	0.0572
14020	1.783	-3.096	-0.416	0.0117	0.0027	0.0397
14025	2.060	-1.632	-0.360	-0.0048	-0.0094	0.0835
14028	1.935	-0.059	-0.077	-0.0096	-0.0268	0.0503
14029	2.028	-0.192	-0.114	-0.0123	-0.0217	0.0614
14030	2.060	-0.475	-0.184	-0.0129	-0.0158	0.0759
15000	0.131	-1.272	0.072	-0.0018	0.0028	-0.0140
15009	0.001	-0.024	0.003	-0.0026	-0.0004	-0.0019
15010	0.002	-0.013	-0.001	-0.0024	-0.0003	-0.0015
15020	0.002	-0.013	-0.001	-0.0024	-0.0003	-0.0015
15098	-0.010	-0.025	0.011	-0.0021	-0.0001	-0.0027
15099	-0.001	-0.021	0.003	-0.0023	-0.0002	-0.0020
15100	0.001	-0.012	-0.001	-0.0022	-0.0002	-0.0016
15110	0.001	-0.012	-0.001	-0.0022	-0.0002	-0.0016
16000	0.145	-1.725	0.069	-0.0051	0.0028	0.0169
16009	0.079	0.058	-0.009	0.0074	-0.0122	0.0071

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
16010	0.032	0.031	0.003	0.0060	-0.0077	0.0049
16020	0.031	0.031	0.003	0.0060	-0.0076	0.0049
17000	-0.137	-2.078	-0.017	0.0022	-0.0000	0.0064
17008	-0.394	-2.081	0.120	0.0066	0.0012	0.0072
17009	-0.426	-2.067	0.151	0.0101	0.0016	0.0085
17010	-0.446	-2.022	0.168	0.0145	0.0021	0.0093
17018	-0.656	-0.324	0.168	0.0354	0.0057	0.0182
17019	-0.680	-0.168	0.157	0.0312	0.0069	0.0179
17020	-0.691	-0.056	0.130	0.0276	0.0078	0.0163
17025	-0.691	-0.000	0.103	0.0251	0.0080	0.0154
17029	-0.678	0.069	0.044	0.0192	0.0081	0.0129
17030	-0.648	0.027	0.032	0.0132	0.0079	0.0127
17099	-0.013	-0.029	0.004	-0.0034	0.0019	-0.0022
17100	-0.005	-0.017	-0.001	-0.0030	0.0012	-0.0016
17110	-0.005	-0.016	-0.001	-0.0030	0.0012	-0.0016
18000	0.141	-0.786	0.005	0.0007	-0.0001	0.0024
19000	-0.136	-1.597	-0.019	0.0019	0.0000	0.0017
19009	-0.254	-1.591	0.105	0.0063	0.0013	0.0051
19010	-0.268	-1.563	0.116	0.0093	0.0017	0.0058
19018	-0.418	-0.260	0.115	0.0293	0.0037	0.0140
19019	-0.433	-0.133	0.109	0.0261	0.0042	0.0138
19020	-0.440	-0.043	0.092	0.0232	0.0047	0.0124

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Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 1 (HYD) WW+HP

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
19025	-0.440	-0.000	0.076	0.0211	0.0048	0.0117
19029	-0.433	0.047	0.041	0.0163	0.0048	0.0093
19030	-0.415	0.009	0.034	0.0113	0.0046	0.0091
19099	-0.011	-0.031	0.006	-0.0035	0.0013	-0.0024
19100	-0.003	-0.018	0.000	-0.0032	0.0008	-0.0018
19110	-0.003	-0.018	0.000	-0.0031	0.0008	-0.0018

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9	0.823	-2.848	-0.757	-0.0975	0.0072	-0.0248
10	1.305	-2.575	-2.676	-0.0971	0.0079	-0.0251
18	1.311	-2.571	-2.698	-0.0971	0.0079	-0.0251
19	1.728	-1.925	-3.794	-0.0620	0.0090	-0.0267
20	2.026	-1.295	-3.871	-0.0201	0.0105	-0.0272
30	2.130	-1.121	-3.699	-0.0180	0.0106	-0.0271
35	2.233	-0.978	-3.527	-0.0154	0.0104	-0.0295
40	2.463	-0.684	-3.127	-0.0152	0.0095	-0.0352
50	2.497	-0.630	-3.063	-0.0153	0.0095	-0.0352
60	2.784	-0.160	-2.518	-0.0157	0.0094	-0.0356
70	2.817	-0.103	-2.454	-0.0158	0.0093	-0.0357
75	2.869	-0.000	-2.355	-0.0163	0.0086	-0.0374
80	2.916	0.095	-2.257	-0.0165	0.0079	-0.0390
81	2.994	0.277	-2.073	-0.0166	0.0070	-0.0408
83	3.034	0.382	-1.965	-0.0163	0.0064	-0.0419
85	3.199	0.920	-1.322	-0.0092	0.0035	-0.0433
89	2.975	0.461	-1.174	0.0738	-0.0010	-0.0458
90	2.304	-0.375	-2.680	0.1432	-0.0018	-0.0470
100	2.294	-0.378	-2.709	0.1432	-0.0018	-0.0470
101	0.861	-0.918	-7.235	0.1452	-0.0018	-0.0465

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
102	0.221	-1.820	-8.872	0.0871	-0.0007	-0.0433
105	3.059	0.454	-1.891	-0.0161	0.0059	-0.0420
110	3.165	0.804	-1.493	-0.0123	0.0040	-0.0429
119	2.465	-1.538	-3.797	-0.0476	0.0038	0.0004
120	2.545	-1.661	-3.143	-0.0918	-0.0077	0.0023
125	2.546	-1.667	-3.105	-0.0920	-0.0076	0.0023
149	2.581	-1.883	-1.615	-0.1029	-0.0052	0.0018
150	2.603	-2.100	0.046	-0.1145	-0.0028	0.0007
160	3.358	-1.714	-0.070	-0.1342	0.0065	0.0082
179	4.016	-1.425	-0.493	-0.1515	0.0111	0.0057
180	4.675	-1.098	-1.044	-0.1687	0.0120	0.0099
182	4.246	-0.398	-4.134	-0.2264	0.0048	0.0410
183	3.505	0.302	-7.829	-0.2477	-0.0025	0.0506
189	4.713	-1.072	-1.075	-0.1687	0.0120	0.0099
190	4.751	-1.047	-1.106	-0.1687	0.0120	0.0099
220	2.111	-1.891	-0.096	-0.1365	-0.0050	-0.0089
229	1.524	-1.493	-0.319	-0.1627	-0.0051	-0.0099
230	0.936	-1.100	-0.476	-0.1890	-0.0018	-0.0086
231	0.993	-0.400	-3.828	-0.2407	-0.0028	-0.0002
232	0.963	0.300	-7.705	-0.2575	-0.0038	0.0027
240	0.157	-0.708	-0.457	-0.2052	0.0010	-0.0043
249	-0.383	-0.632	-0.429	-0.2164	0.0007	-0.0006

CAESAR II Ver.5.10.02, Date: Feb, 2013 Time: 15:32
Job: PROYECTO FINAL DE CARRERA Ibán López García

DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
250	-0.924	-0.625	-0.391	-0.2276	0.0015	-0.0007
252	-0.859	0.075	-4.078	-0.2489	0.0021	-0.0067
253	-0.736	0.775	-7.926	-0.2488	0.0027	-0.0084
260	-1.704	-0.612	-0.302	-0.2351	0.0010	0.0015
269	-2.245	-0.725	-0.293	-0.2402	-0.0003	0.0037
270	-2.787	-0.864	-0.312	-0.2454	-0.0005	0.0029
272	-2.658	-0.164	-4.176	-0.2550	0.0027	-0.0165
273	-2.337	0.536	-8.048	-0.2466	0.0059	-0.0221
289	-3.724	-1.063	-0.342	-0.2483	-0.0003	0.0020
290	-4.661	-0.988	-0.341	-0.2512	0.0004	-0.0055
292	-4.292	-0.288	-4.228	-0.2536	0.0057	-0.0374
293	-3.603	0.413	-8.055	-0.2433	0.0109	-0.0473
299	-4.699	-0.974	-0.340	-0.2512	0.0004	-0.0055
300	-4.737	-0.959	-0.339	-0.2512	0.0005	-0.0055
338	3.348	0.563	-1.360	-0.0158	0.0051	-0.0419
339	3.430	0.300	-1.444	-0.0200	0.0093	-0.0359
340	3.098	-0.602	-1.490	-0.0487	0.0047	-0.0090
341	3.208	-0.398	-1.702	-0.0414	0.0086	-0.0238
346	3.055	-0.705	-1.207	-0.0502	0.0049	-0.0061
349	3.017	-0.967	-0.445	-0.0562	0.0053	-0.0003
350	3.039	-1.228	0.432	-0.0661	0.0058	0.0022
360	3.412	0.074	-1.570	-0.0307	0.0115	-0.0342

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
379	4.884	-1.842	-0.578	-0.1487	0.0055	0.0075
380	4.923	-1.826	-0.590	-0.1487	0.0055	0.0075
382	4.441	-1.604	-3.004	-0.1824	-0.0167	0.0406
383	3.776	-1.350	-5.782	-0.1955	-0.0389	0.0437
400	1.752	-1.854	0.408	-0.0832	-0.0047	0.0029
410	0.969	-1.719	0.156	-0.0937	-0.0060	-0.0063
420	0.212	-1.460	-0.081	-0.1038	-0.0048	-0.0056
429	-0.562	-1.079	-0.170	-0.1079	-0.0001	-0.0093
430	-1.336	-0.832	-0.153	-0.1120	-0.0000	0.0006
440	-2.092	-1.024	-0.183	-0.1161	-0.0009	0.0033
449	-2.868	-0.929	-0.160	-0.1095	0.0014	-0.0050
450	-3.644	-0.775	-0.102	-0.1030	0.0007	0.0006
460	-5.966	-0.998	0.012	-0.0799	0.0029	0.0126
469	-6.769	-1.856	0.183	-0.0718	0.0045	0.0195
470	-6.809	-1.899	0.193	-0.0718	0.0045	0.0195
489	-6.938	-1.556	-0.799	-0.0630	0.0077	0.0128
490	-7.153	-1.299	-1.665	-0.0571	0.0108	0.0204
509	-7.494	-0.955	-2.466	-0.0360	0.0201	0.0085
510	-7.394	-0.813	-2.449	-0.0297	0.0381	-0.0033
540	-7.392	-0.811	-2.448	-0.0297	0.0382	-0.0034
550	-6.179	0.129	0.421	-0.0298	0.0388	-0.0037
559	-5.835	0.224	0.669	-0.0227	0.0721	-0.0096

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
560	-5.363	0.199	0.470	-0.0151	0.1071	-0.0224
565	-4.698	-0.000	-0.395	-0.0061	0.1285	-0.0350
570	-3.194	-0.682	-2.906	0.0142	0.1733	-0.0280
578	-1.059	-0.910	-1.606	0.0121	0.1265	-0.0209
579	-0.617	-0.794	-1.259	0.0005	0.0963	-0.0130
580	-0.448	-0.448	-1.139	-0.0070	0.0786	-0.0056
590	-0.061	0.011	-0.451	0.0013	0.0265	0.0028
600	0.000	0.000	0.000	0.0000	0.0000	0.0000
620	-3.763	-0.641	-3.187	0.0160	0.1926	-0.0175
630	-9.886	-0.120	-6.056	0.0172	0.1951	-0.0160
635	-10.860	-0.000	-6.479	0.0335	0.2212	-0.0002
680	-17.462	-9.689	2.812	0.1955	0.0544	0.0476
690	-20.103	-10.900	4.585	0.2098	0.0663	0.0300
691	-21.694	-11.301	5.813	0.2184	0.0724	0.0110
692	-22.675	-10.679	7.913	0.2282	0.0848	-0.0438
700	-22.226	-9.253	11.237	0.2406	0.0918	-0.0977
704	-21.846	-8.915	12.142	0.2415	0.0928	-0.1021
705	-20.650	-7.929	14.795	0.2433	0.0958	-0.1133
707	-14.365	-3.510	26.622	0.2341	0.1090	-0.1329
709	-7.938	2.159	39.313	0.1496	0.1084	-0.0672
710	-8.780	3.153	41.267	0.1187	0.0968	-0.0254
719	-10.698	2.907	42.863	0.0735	0.0916	0.0077

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
720	-10.953	1.721	42.704	0.0313	0.0899	0.0193
730	-10.950	1.705	42.698	0.0311	0.0898	0.0194
740	-20.244	-7.614	15.648	0.2436	0.0967	-0.1163
745	-15.304	-4.142	24.971	0.2372	0.1071	-0.1331
750	-8.282	-4.195	-0.733	0.1457	0.0182	0.0480
754	-6.432	-3.279	-1.046	0.1370	0.0126	0.0412
755	-5.644	-2.931	-1.145	0.1342	0.0105	0.0383
760	3.527	-0.501	-1.333	0.1006	-0.0033	0.0124
769	5.378	-0.286	-1.256	0.0949	-0.0041	0.0089
770	6.165	-0.216	-1.218	0.0930	-0.0044	0.0074
780	15.342	0.009	-0.719	0.0718	-0.0047	0.0002
789	17.195	0.012	-0.625	0.0686	-0.0046	-0.0001
790	17.984	0.008	-0.584	0.0677	-0.0046	-0.0007
800	23.231	-0.104	-0.351	0.0624	-0.0030	-0.0025
810	31.127	-0.214	-0.297	0.0543	0.0021	0.0016
820	39.030	0.437	-0.723	0.0462	0.0073	0.0154
829	40.335	0.681	-0.833	0.0451	0.0078	0.0181
830	40.573	0.728	-0.854	0.0451	0.0078	0.0181
831	37.834	2.082	-0.735	-0.0299	0.0708	0.2322
832	33.305	3.531	-1.664	-0.0810	0.1337	0.3017
885	8.123	-0.000	-6.462	0.0184	-0.1334	-0.0139
890	7.500	-0.086	-6.039	0.0165	-0.1322	-0.0219

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
900	3.333	-0.601	-3.171	0.0161	-0.1314	-0.0226
910	2.939	-0.647	-2.889	0.0157	-0.1208	-0.0279
918	1.211	-0.906	-1.590	0.0138	-0.1139	-0.0054
919	0.808	-0.794	-1.243	0.0001	-0.1001	-0.0011
920	0.650	-0.445	-1.129	-0.0088	-0.0897	0.0039
930	0.112	0.014	-0.450	0.0019	-0.0407	-0.0007
940	0.000	0.000	0.000	0.0000	-0.0000	-0.0000
958	0.651	0.160	-5.815	-0.0245	-0.0711	-0.0002
959	0.531	0.234	-5.367	-0.0162	-0.0683	-0.0080
960	0.768	0.199	-4.972	-0.0088	-0.0697	-0.0224
965	1.434	-0.000	-4.449	-0.0013	-0.0765	-0.0338
970	0.655	0.158	-5.820	-0.0245	-0.0711	-0.0002
980	2.902	-0.617	-8.689	-0.0247	-0.0710	0.0004
1008	3.314	-1.137	-8.120	-0.1795	-0.0574	0.0306
1009	3.154	-0.868	-8.640	-0.1023	-0.0589	0.0078
1010	2.906	-0.618	-8.690	-0.0249	-0.0710	0.0005
1044	-4.429	-0.654	-1.509	-0.0967	-0.0027	0.0037
1045	-4.525	-0.398	-2.890	-0.0927	-0.0051	0.0107
1048	-4.684	-0.184	-3.965	-0.0805	-0.0072	0.0115
1049	-4.714	-0.034	-4.170	-0.0403	-0.0032	-0.0027
1050	-4.700	0.071	-4.145	-0.0077	0.0068	-0.0121
1080	-4.700	0.071	-4.144	-0.0076	0.0068	-0.0121

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1090	-4.480	0.313	-1.275	-0.0077	0.0073	-0.0125
1099	-4.268	0.316	-0.970	-0.0039	0.0320	-0.0174
1100	-3.864	0.237	-0.999	0.0011	0.0567	-0.0281
1105	-3.198	-0.000	-1.469	0.0063	0.0700	-0.0388
1110	-1.694	-0.782	-2.814	0.0181	0.0889	-0.0448
1225	-5.575	-0.000	-6.387	0.0152	0.1100	-0.0410
1230	-5.087	-0.090	-5.964	0.0201	0.0988	-0.0432
1240	-1.984	-0.724	-3.096	0.0199	0.0976	-0.0434
1248	-0.623	-1.011	-1.516	0.0090	0.0625	-0.0317
1249	-0.377	-0.876	-1.179	-0.0067	0.0460	-0.0245
1250	-0.239	-0.516	-1.092	-0.0162	0.0363	-0.0161
1260	-0.022	-0.001	-0.450	-0.0030	0.0105	-0.0041
1270	0.000	0.000	0.000	-0.0000	0.0000	-0.0000
1294	0.177	-1.205	-1.631	-0.1086	-0.0159	0.0080
1295	0.017	-0.949	-3.210	-0.1077	-0.0270	0.0117
1298	-0.111	-0.735	-4.476	-0.0964	-0.0363	0.0074
1299	-0.175	-0.561	-4.739	-0.0548	-0.0367	-0.0042
1300	-0.310	-0.407	-4.736	-0.0195	-0.0405	-0.0090
1330	-0.312	-0.406	-4.735	-0.0195	-0.0406	-0.0090
1340	-1.593	0.209	-4.167	-0.0195	-0.0405	-0.0093
1349	-1.590	0.259	-3.771	-0.0138	-0.0326	-0.0141
1350	-1.295	0.208	-3.522	-0.0076	-0.0259	-0.0244

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1355	-0.629	-0.000	-3.344	-0.0003	-0.0244	-0.0348
1360	0.876	-0.690	-2.895	0.0160	-0.0338	-0.0357
1425	2.241	-0.000	-6.469	0.0167	-0.0303	-0.0278
1430	2.087	-0.086	-6.045	0.0177	-0.0348	-0.0323
1440	0.984	-0.641	-3.177	0.0174	-0.0349	-0.0327
1448	0.344	-0.930	-1.595	0.0122	-0.0370	-0.0191
1449	0.232	-0.813	-1.249	-0.0001	-0.0348	-0.0143
1450	0.219	-0.465	-1.132	-0.0081	-0.0326	-0.0083
1460	0.047	0.008	-0.451	0.0005	-0.0165	-0.0039
1470	0.000	0.000	0.000	0.0000	-0.0000	-0.0000
1499	2.739	1.264	-11.263	-0.1371	-0.0099	0.0473
1500	2.619	1.648	-11.253	-0.0350	-0.0149	0.0472
1510	0.858	-0.475	-6.886	0.0189	-0.0171	0.0244
1550	0.000	-0.000	-3.000	-0.0000	-0.0000	0.0000
1598	0.933	0.823	-10.596	-0.2352	-0.0045	0.0026
1599	0.916	1.271	-11.260	-0.1421	-0.0049	0.0027
1600	0.891	1.669	-11.255	-0.0379	-0.0057	0.0028
1610	0.292	-0.388	-6.887	0.0200	-0.0058	0.0015
1650	0.000	-0.000	-3.000	-0.0000	-0.0000	0.0000
1698	-0.641	1.299	-10.681	-0.2220	0.0032	-0.0081
1699	-0.606	1.725	-11.293	-0.1293	0.0033	-0.0077
1700	-0.581	2.081	-11.269	-0.0284	0.0037	-0.0075

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1710	-0.190	-0.434	-6.895	0.0205	0.0038	-0.0039
1750	-0.000	-0.000	-3.000	-0.0000	0.0000	-0.0000
1798	-2.091	1.059	-10.752	-0.2157	0.0082	-0.0210
1799	-2.001	1.470	-11.328	-0.1174	0.0090	-0.0197
1800	-1.933	1.771	-11.284	-0.0127	0.0111	-0.0195
1810	-0.678	-1.196	-6.896	0.0188	0.0132	-0.0133
1850	-0.000	-0.000	-3.000	-0.0000	0.0000	-0.0000
1925	-1.360	-0.000	-6.426	0.0173	0.0323	-0.0385
1930	-1.224	-0.094	-6.002	0.0202	0.0264	-0.0412
1940	-0.399	-0.728	-3.133	0.0199	0.0259	-0.0415
1950	-0.322	-0.785	-2.852	0.0182	0.0239	-0.0432
1958	-0.106	-1.025	-1.552	0.0106	0.0091	-0.0269
1959	-0.051	-0.898	-1.211	-0.0038	0.0023	-0.0205
1960	0.010	-0.543	-1.111	-0.0128	-0.0013	-0.0128
1970	0.017	-0.001	-0.455	-0.0027	-0.0046	-0.0041
1980	0.000	0.000	0.000	-0.0000	-0.0000	-0.0000
1989	-2.188	-0.769	-1.945	-0.1247	-0.0073	0.0094
1990	-2.355	-0.513	-3.769	-0.1245	-0.0137	0.0132
1998	-2.515	-0.300	-5.229	-0.1103	-0.0190	0.0101
1999	-2.554	-0.116	-5.526	-0.0572	-0.0164	-0.0053
2000	-2.595	0.023	-5.520	-0.0097	-0.0121	-0.0135
2030	-2.596	0.023	-5.519	-0.0096	-0.0121	-0.0136

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2040	-2.976	0.327	-2.650	-0.0096	-0.0118	-0.0140
2049	-2.850	0.333	-2.307	-0.0051	0.0047	-0.0191
2050	-2.492	0.249	-2.217	0.0001	0.0200	-0.0299
2060	-1.827	-0.000	-2.394	0.0057	0.0262	-0.0401
2098	-3.068	0.936	-10.727	-0.2144	0.0148	-0.0459
2099	-2.876	1.352	-11.310	-0.1231	0.0161	-0.0440
2100	-2.741	1.690	-11.279	-0.0255	0.0194	-0.0435
2110	-0.799	-0.701	-6.899	0.0163	0.0167	-0.0225
2150	-0.000	-0.000	-3.000	-0.0000	0.0000	-0.0000
2199	37.602	3.624	3.232	0.0608	0.5771	-0.5522
2200	39.949	3.553	3.421	0.0302	0.6363	-0.5410
2205	48.241	3.286	4.002	0.0140	0.6678	-0.4493
2210	65.087	2.188	3.750	-0.0208	0.2527	-0.1651
2211	64.530	2.760	4.636	-0.0021	0.4221	-0.2477
2214	66.948	-1.209	-0.099	0.0403	-0.1171	-0.0304
2215	67.477	-1.101	-0.052	0.0548	-0.2077	-0.0228
2220	72.707	-0.000	-1.112	0.0245	-0.2109	-0.0080
2225	75.426	0.010	-1.873	-0.0193	-0.0974	0.0026
2240	76.646	-0.000	0.155	-0.0494	-0.0657	-0.0197
2300	75.198	-0.000	-2.263	-0.0271	-0.0617	-0.0009
2310	73.755	-0.000	-2.000	-0.0515	0.0410	-0.0113
2320	75.165	0.773	-3.269	-0.0727	0.0219	-0.1192

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2500	76.262	1.197	-3.936	-0.0717	0.0217	-0.1186
2504	76.815	1.454	-4.205	-0.0201	0.0154	-0.0724
2508	77.154	1.671	-4.297	-0.0189	0.0153	-0.0712
2510	77.362	1.349	-4.366	-0.0180	0.0152	-0.0705
2520	77.485	1.174	-4.405	-0.0106	0.0136	-0.0639
2540	77.628	0.976	-4.447	-0.0078	0.0127	-0.0613
2545	78.024	0.441	-4.558	-0.0074	0.0125	-0.0610
2548	78.508	0.369	-4.962	0.0239	-0.0353	-0.0286
2549	78.586	0.435	-5.204	0.0188	-0.0464	-0.0225
2550	78.359	0.263	-4.774	0.0231	-0.0335	-0.0299
2551	78.199	0.254	-4.634	0.0046	-0.0111	-0.0384
2555	78.500	0.380	-5.437	0.0082	-0.0461	-0.0077
2560	78.034	-0.000	-5.915	-0.0003	-0.0460	-0.0000
3000	79.238	0.776	-1.294	-0.0859	-0.0261	-0.2113
3010	81.181	1.199	-2.080	-0.0845	-0.0256	-0.2097
3020	82.091	1.458	-2.376	-0.0149	-0.0125	-0.1019
3040	82.565	1.675	-2.443	-0.0133	-0.0122	-0.0992
3050	82.774	1.228	-2.388	-0.0122	-0.0122	-0.0977
3060	82.897	0.992	-2.355	-0.0020	-0.0131	-0.0850
3080	82.997	0.732	-2.314	0.0017	-0.0138	-0.0804
3090	83.274	0.030	-2.192	0.0022	-0.0140	-0.0800
3099	83.443	-0.186	-2.143	0.0196	-0.0401	-0.0458

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
3100	83.690	-0.116	-2.187	0.0450	-0.0615	-0.0330
3108	83.954	0.079	-2.320	0.0459	-0.0625	-0.0309
3109	84.127	0.238	-2.554	0.0347	-0.0613	-0.0251
3110	84.089	0.243	-2.811	0.0109	-0.0466	-0.0082
3120	83.762	-0.000	-3.256	-0.0003	-0.0386	0.0000
3200	77.035	0.774	-3.147	-0.0519	-0.0345	-0.1612
3210	78.519	1.198	-3.622	-0.0509	-0.0342	-0.1603
3220	79.242	1.455	-3.780	-0.0012	-0.0252	-0.0885
3240	79.656	1.672	-3.783	-0.0001	-0.0250	-0.0867
3250	79.865	1.281	-3.670	0.0007	-0.0250	-0.0856
3260	79.987	1.071	-3.603	0.0080	-0.0257	-0.0761
3280	80.131	0.835	-3.521	0.0107	-0.0262	-0.0726
3290	80.527	0.201	-3.292	0.0110	-0.0263	-0.0722
3299	80.758	0.016	-3.231	0.0247	-0.0449	-0.0436
3300	81.031	0.091	-3.322	0.0431	-0.0599	-0.0335
3309	81.435	0.407	-3.790	0.0311	-0.0597	-0.0254
3310	81.359	0.372	-4.061	0.0097	-0.0479	-0.0084
3320	80.898	-0.000	-4.528	-0.0003	-0.0420	-0.0000
4000	-10.766	0.917	42.482	0.0213	0.0838	0.0198
4005	-11.922	1.142	41.059	0.0098	0.0645	0.0197
4010	-13.742	0.704	33.945	-0.0113	-0.0117	0.0196
4020	-9.917	-0.000	25.249	-0.0030	-0.0588	0.0194

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
4030	-4.000	-0.000	16.553	0.0013	-0.0553	0.0193
4040	-0.146	-0.000	8.648	-0.0019	-0.0354	0.0191
4050	4.000	-0.000	-4.000	0.0013	-0.0296	0.0189
4100	-9.991	0.737	43.282	0.0191	0.0897	0.0193
4110	-9.687	0.675	43.583	0.0183	0.0916	0.0192
4120	-2.000	-0.000	50.564	0.0019	0.0919	0.0153
4130	4.777	-0.000	60.865	0.0073	0.0269	0.0096
4140	5.327	-0.812	66.174	0.0155	-0.0083	0.0067
4150	5.204	-1.043	67.521	0.0155	-0.0083	0.0067
4229	-7.431	-2.201	0.234	0.0182	0.0419	-0.0093
4230	-7.072	-0.751	-0.111	-0.0488	0.0687	-0.0276
4299	4.162	1.080	-0.580	0.0006	0.0307	0.0386
4300	3.444	2.529	-1.116	-0.0595	0.0650	0.0468
4399	15.452	1.460	-0.349	-0.0219	0.0377	0.1029
4400	13.424	2.909	-1.215	-0.0787	0.0798	0.1350
5000	77.056	-0.176	0.740	-0.0494	-0.0657	-0.0198
5260	85.165	0.012	-2.674	-0.0003	-0.0367	0.0005
5495	3.481	-0.867	-2.124	0.0118	-0.0316	-0.1144
5500	4.720	-2.322	-1.663	0.0197	-0.2178	-0.2595
5501	3.973	-1.968	-1.745	0.0057	-0.1334	-0.2284
5510	4.732	-2.321	-1.666	0.0198	-0.2180	-0.2598
5520	7.808	-2.035	-2.313	0.0209	-0.2191	-0.2627

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
5530	15.160	-0.606	-3.830	0.0477	-0.2033	-0.4692
5540	15.657	-0.490	-3.943	0.0476	-0.2031	-0.4697
5550	16.037	-0.400	-4.029	0.0455	-0.1976	-0.4815
5559	17.793	-0.153	-4.256	0.0022	-0.1483	-0.5132
5560	20.071	-0.000	-4.411	-0.0440	-0.1414	-0.5819
5570	20.102	0.002	-4.414	-0.0441	-0.1411	-0.5821
5580	29.730	0.762	-5.149	-0.0449	-0.1384	-0.5838
5590	31.800	0.923	-5.314	-0.0471	-0.1279	-0.5879
5595	66.423	3.599	-8.149	-0.0385	-0.0282	-0.5495
5599	78.541	4.638	-8.613	0.0350	-0.0260	-0.3795
5600	79.218	4.383	-8.232	0.0855	-0.0192	-0.3465
5605	79.149	4.012	-8.041	0.0878	-0.0154	-0.3304
5609	78.128	0.163	-5.869	0.0245	-0.0466	-0.1400
5610	77.496	0.281	-6.012	0.0249	-0.0279	-0.0271
5620	77.011	0.000	-6.442	-0.0003	-0.0476	-0.0000
6000	73.675	0.028	-1.898	-0.0515	0.0410	-0.0113
6100	87.078	-0.000	-1.926	-0.0003	-0.0344	-0.0036
6110	98.953	-0.000	2.000	-0.0003	-0.0278	0.0115
6120	79.161	-0.000	-5.354	-0.0003	-0.0444	-0.0000
6130	71.244	-0.000	-9.468	-0.0003	-0.0476	-0.0012
7000	7.179	-0.000	-12.718	0.0009	-0.0366	0.0187
7010	11.417	-0.000	-22.229	-0.0063	-0.0443	0.0185

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7030	17.740	-0.924	-30.252	-0.0133	-0.0560	0.0179
7031	16.355	-1.081	-30.461	-0.0133	-0.0532	0.0184
7032	15.264	-1.010	-29.615	-0.0137	-0.0503	0.0184
7040	23.303	-0.000	-26.697	-0.0133	-0.0600	0.0083
7050	25.972	0.110	-24.908	-0.0133	-0.0617	0.0012
7060	34.399	-0.000	-18.965	-0.0133	-0.0661	-0.0019
7070	37.068	-0.066	-17.005	-0.0133	-0.0673	-0.0016
7080	45.495	-0.000	-10.633	-0.0133	-0.0698	-0.0005
7090	48.164	-0.067	-8.572	-0.0133	-0.0704	-0.0025
7100	56.591	-0.000	-2.000	-0.0133	-0.0711	0.0038
7110	56.908	0.013	-1.752	-0.0133	-0.0711	0.0038
7199	4.204	0.006	66.144	0.0125	-0.0240	0.0052
7200	3.596	0.095	65.963	0.0110	-0.0353	0.0039
7210	0.105	-0.000	64.192	0.0096	-0.0562	0.0014
7220	-6.235	-0.000	59.122	0.0070	-0.0874	0.0003
7230	-17.331	-0.000	46.105	0.0024	-0.1211	0.0015
7240	-28.110	-0.199	31.041	-0.0021	-0.1283	-0.0019
7250	-27.007	-0.216	30.257	-0.0012	-0.1271	-0.0019
7260	-25.664	-0.100	29.291	0.0018	-0.1243	-0.0021
7270	-22.332	-0.049	26.855	0.0020	-0.1241	-0.0021
7280	-20.830	-0.000	25.735	0.0022	-0.1191	-0.0022
7290	-19.667	0.011	24.835	0.0008	-0.1152	-0.0023

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7295	-12.674	0.001	18.614	-0.0001	-0.0891	-0.0028
7300	-11.910	-0.000	17.823	-0.0006	-0.0859	-0.0029
7320	-5.735	-0.000	9.912	0.0001	-0.0562	-0.0036
7330	-2.000	-0.000	2.000	-0.0000	-0.0300	-0.0044
7340	-0.081	-0.000	-5.895	-0.0000	-0.0187	-0.0051
7350	2.000	-0.000	-13.790	0.0001	-0.0337	-0.0059
7370	5.312	-0.000	-21.684	-0.0006	-0.0313	-0.0066
7373	5.607	-0.013	-22.583	-0.0014	-0.0272	-0.0067
7376	5.991	-0.021	-28.790	0.0022	0.0230	-0.0072
7380	5.755	-0.000	-29.579	0.0022	0.0321	-0.0073
7400	-2.000	-0.000	-37.474	-0.0089	0.1565	-0.0081
7409	-12.846	-0.797	-41.054	-0.0201	0.2843	-0.0084
7410	-14.875	-0.795	-38.488	-0.0203	0.3286	-0.0093
7415	-21.592	-0.000	-13.447	-0.0222	0.3065	-0.0086
7419	-23.821	-0.004	-10.005	-0.0228	0.2307	-0.0052
7420	-25.973	-0.196	-10.054	-0.0207	0.1542	-0.0052
7430	-30.600	-0.959	-15.719	-0.0000	-0.0059	-0.0053
7438	-25.291	-0.194	-21.384	0.0208	-0.1632	-0.0054
7439	-23.066	-0.002	-21.405	0.0229	-0.2368	-0.0053
7440	-21.195	0.032	-19.186	0.0225	-0.3013	-0.0080
7445	-20.818	-0.000	-17.911	0.0224	-0.3089	-0.0087
7449	-12.101	-0.816	9.513	0.0205	-0.2754	-0.0089

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CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7450	-9.429	-0.662	9.665	0.0191	-0.2187	-0.0090
7460	-2.000	-0.000	5.895	0.0093	-0.1375	-0.0090
7480	3.735	-0.000	-2.000	-0.0031	-0.0091	-0.0090
7482	3.774	-0.034	-2.902	-0.0032	0.0000	-0.0090
7485	2.297	-0.034	-9.133	0.0035	0.0332	-0.0090
7490	2.000	-0.000	-9.926	0.0037	0.0337	-0.0090
7500	1.824	0.019	-10.401	0.0037	0.0337	-0.0090
7600	-29.222	-0.171	31.825	-0.0027	-0.1293	-0.0020
7610	-30.604	-0.011	32.786	-0.0018	-0.1314	-0.0022
7615	-31.190	-0.000	33.187	-0.0002	-0.1329	-0.0023
7620	-32.383	0.053	33.993	0.0043	-0.1377	-0.0028
7650	-35.407	-0.044	35.985	0.0044	-0.1380	-0.0029
7660	-45.736	-0.000	41.555	-0.0042	-0.2000	-0.0064
7670	-67.766	-0.000	49.453	0.0154	-0.3093	-0.0114
7679	-87.831	-1.533	53.276	0.0333	-0.4173	-0.0148
7680	-89.851	-1.520	50.288	0.0330	-0.4459	-0.0166
7690	-96.809	-0.000	17.543	0.0325	-0.3481	-0.0173
7699	-98.919	0.108	13.434	0.0325	-0.2237	-0.0131
7700	-100.468	-0.092	13.528	0.0299	-0.1172	-0.0133
7708	-82.257	-0.094	24.555	-0.0300	0.4078	-0.0133
7709	-78.556	0.107	23.763	-0.0327	0.5040	-0.0131
7710	-76.202	0.107	19.887	-0.0328	0.5919	-0.0155

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CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7720	-75.583	-0.000	15.765	-0.0329	0.6141	-0.0173
7728	-68.623	-1.552	-35.971	-0.0342	0.6756	-0.0180
7729	-65.910	-1.575	-40.647	-0.0344	0.6355	-0.0170
7730	-61.030	-1.368	-41.899	-0.0338	0.5872	-0.0170
7740	-34.986	-0.000	-37.491	-0.0158	0.4809	-0.0170
7750	-2.000	-0.000	-29.593	0.0041	0.2707	-0.0170
7760	12.904	-0.000	-21.695	-0.0011	0.0830	-0.0170
7770	13.641	-0.000	-20.796	0.0004	0.0660	-0.0170
7780	14.742	-0.004	-14.586	-0.0006	-0.0262	-0.0170
7790	14.472	-0.000	-13.796	0.0003	-0.0349	-0.0170
7800	8.805	-0.000	-5.898	-0.0001	-0.0829	-0.0170
7810	2.000	-0.000	2.000	0.0000	-0.0609	-0.0170
7820	-1.241	-0.000	9.926	-0.0000	-0.0183	-0.0170
7830	-2.000	-0.000	17.852	0.0001	-0.0041	-0.0170
7840	-2.355	-0.000	25.778	-0.0003	-0.0041	-0.0170
7850	-2.395	-0.006	26.680	0.0007	-0.0041	-0.0170
7860	-2.674	0.000	32.911	-0.0003	-0.0041	-0.0170
7870	-2.710	-0.000	33.703	0.0010	-0.0041	-0.0170
7880	-3.065	-0.000	41.629	-0.0040	-0.0041	-0.0170
7890	-3.086	0.021	42.105	-0.0039	-0.0041	-0.0170
8000	-2.489	1.692	-10.722	0.0195	0.0216	-0.0403
8010	-2.132	1.361	-9.962	0.0204	0.0216	-0.0402

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
8020	-2.000	1.212	-9.685	0.0273	0.0216	-0.0386
8100	-1.786	1.597	-10.727	0.0347	0.0128	-0.0176
8110	-1.575	1.014	-9.968	0.0356	0.0128	-0.0175
8120	-1.496	0.788	-9.690	0.0376	0.0130	-0.0171
8200	-0.534	2.105	-10.713	0.0187	0.0040	-0.0070
8210	-0.467	1.787	-9.954	0.0196	0.0040	-0.0070
8220	-0.442	1.640	-9.676	0.0273	0.0041	-0.0067
8300	0.819	1.797	-10.700	0.0112	-0.0062	0.0026
8310	0.717	1.601	-9.941	0.0123	-0.0062	0.0026
8320	0.678	1.496	-9.664	0.0208	-0.0063	0.0025
8400	2.415	1.746	-10.698	0.0131	-0.0182	0.0437
8410	2.113	1.520	-9.939	0.0141	-0.0183	0.0436
8420	2.000	1.405	-9.662	0.0222	-0.0187	0.0419
9100	-0.029	-2.553	-8.982	0.0066	0.0003	-0.0421
9101	-0.009	-1.798	-7.572	-0.0160	0.0002	-0.0392
9110	0.079	0.676	7.424	-0.1473	0.0010	-0.0006
9119	0.084	0.874	5.751	-0.1480	0.0012	-0.0003
9120	0.085	1.218	2.868	-0.1433	0.0016	0.0002
9129	0.071	2.025	1.413	-0.0656	0.0012	0.0026
9130	0.073	2.374	1.457	0.0242	0.0018	0.0032
9140	0.175	0.677	2.283	0.0431	0.0025	0.0048
9150	0.213	-0.000	2.546	0.0455	0.0026	0.0053

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CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9160	0.267	-0.920	2.889	0.0451	0.0029	0.0060
9180	0.091	-0.992	2.896	0.0443	0.0006	0.0073
9190	-0.100	-1.085	2.875	0.0424	-0.0023	0.0087
9199	-0.331	-1.345	2.819	0.0356	-0.0173	0.0070
9200	-0.550	-1.563	2.917	0.0040	-0.0118	-0.0037
9210	-0.551	-1.564	2.920	0.0040	-0.0118	-0.0037
9220	-0.633	-1.591	3.044	0.0038	-0.0117	-0.0038
9230	-0.994	-1.258	3.699	-0.0239	-0.0079	-0.0091
9240	-1.211	-0.575	4.199	-0.0249	-0.0077	-0.0093
9250	-1.358	-0.000	4.584	-0.0193	-0.0058	-0.0124
9280	-1.436	0.198	4.848	-0.0097	-0.0046	-0.0146
9290	-1.467	0.265	4.972	-0.0096	-0.0046	-0.0146
9300	-1.586	-0.000	6.689	0.0121	0.0016	-0.0287
9310	-1.242	-0.791	8.407	-0.0077	0.0050	-0.0427
9320	-1.207	-0.737	8.531	-0.0079	0.0050	-0.0427
9330	-0.995	-0.178	9.241	-0.0156	0.0055	-0.0485
9335	-0.928	-0.000	9.426	-0.0108	0.0073	-0.0419
9340	-0.708	-1.030	9.175	-0.0169	0.0032	-0.0517
9345	-0.495	-1.644	9.137	-0.0169	0.0032	-0.0518
9350	-0.726	-1.157	9.056	-0.0163	0.0024	-0.0500
9360	-0.792	-1.618	8.534	-0.0153	0.0022	-0.0496
9370	-0.453	-0.000	6.391	0.0099	-0.0065	-0.0189

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NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9378	0.523	-1.335	4.122	-0.0158	-0.0074	0.0135
9379	0.652	-1.422	3.976	-0.0150	-0.0046	0.0173
9380	0.834	-1.269	3.929	-0.0134	-0.0000	0.0268
9390	1.521	-0.199	3.862	-0.0177	0.0044	0.0264
9500	-0.904	0.023	9.481	-0.0085	0.0078	-0.0399
9510	-0.664	0.270	10.023	-0.0082	0.0081	-0.0389
9519	-0.453	0.209	10.121	-0.0077	0.0192	-0.0307
9520	-0.209	0.053	10.025	-0.0098	0.0081	-0.0108
9530	-0.207	0.051	10.024	-0.0097	0.0081	-0.0107
9550	-0.016	-0.047	9.939	-0.0077	0.0053	-0.0094
9560	0.160	-0.133	9.886	-0.0068	0.0030	-0.0094
9580	0.335	-0.228	9.879	-0.0064	0.0007	-0.0095
9590	0.527	-0.331	9.899	-0.0054	-0.0021	-0.0095
9599	0.756	-0.412	9.953	-0.0008	-0.0170	-0.0035
9600	0.970	-0.368	9.852	0.0114	-0.0109	0.0015
9610	0.971	-0.367	9.849	0.0114	-0.0109	0.0015
9620	1.272	-0.045	9.350	0.0113	-0.0107	0.0016
9622	1.309	-0.000	9.288	0.0085	-0.0104	0.0019
9624	1.344	0.020	9.227	0.0056	-0.0100	0.0022
9627	1.425	0.063	9.081	0.0053	-0.0100	0.0022
9630	1.784	-0.103	8.254	-0.0053	-0.0055	0.0062
9640	1.822	-0.139	8.130	-0.0052	-0.0055	0.0063

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9650	1.858	-0.173	8.007	-0.0041	-0.0049	0.0069
9660	2.014	-0.000	6.515	0.0030	0.0007	0.0141
9670	1.726	0.126	4.696	0.0003	0.0042	0.0229
9680	1.697	0.128	4.571	0.0003	0.0042	0.0229
9690	1.567	-0.000	4.047	-0.0133	0.0044	0.0255
9710	1.488	-0.334	3.745	-0.0180	0.0055	0.0253
9720	1.330	-0.828	3.245	-0.0172	0.0058	0.0251
9730	1.170	-1.031	2.872	-0.0029	0.0094	0.0217
9800	1.103	-1.050	2.746	-0.0027	0.0095	0.0217
9809	0.882	-0.948	2.652	0.0325	0.0200	0.0095
9810	0.636	-0.834	2.753	0.0416	0.0081	0.0038
9820	0.634	-0.834	2.754	0.0417	0.0081	0.0038
9840	0.442	-0.873	2.838	0.0441	0.0052	0.0049
9900	0.219	-0.000	10.229	-0.0046	0.0030	-0.0092
9910	0.282	0.058	10.610	0.0001	0.0029	-0.0091
9920	0.346	-0.005	11.008	0.0067	0.0028	-0.0090
9950	0.217	-1.160	10.124	0.0799	0.0022	-0.0087
9951	0.329	-0.522	11.032	0.0532	0.0023	-0.0090
9960	0.215	-1.163	10.107	0.0799	0.0022	-0.0087
9961	0.065	-1.475	8.687	0.0785	0.0021	-0.0086
9962	-0.044	-2.043	7.917	0.0387	0.0019	-0.0087
10000	0.013	0.104	10.263	-0.0046	0.0030	-0.0092

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10010	-0.074	-2.349	8.034	-0.0054	0.0011	-0.0089
10011	-0.014	-1.302	9.482	-0.0151	0.0005	-0.0089
10012	0.003	-0.528	10.508	-0.0112	0.0002	-0.0089
10020	0.001	0.083	15.461	0.0023	-0.0001	-0.0089
10029	0.001	0.073	15.539	0.0023	-0.0001	-0.0089
10030	0.000	0.063	15.617	0.0023	-0.0001	-0.0089
10070	0.073	2.369	1.461	0.0243	0.0018	0.0032
10080	0.119	1.656	1.859	0.0357	0.0022	0.0040
10100	0.550	-3.004	0.325	-0.0952	0.0068	-0.0246
10110	0.015	-2.105	-8.543	-0.0060	-0.0001	-0.0013
10111	0.004	-1.128	-7.335	-0.0129	-0.0001	-0.0036
10112	0.001	-0.395	-6.425	-0.0096	-0.0000	-0.0053
10120	-0.074	-1.005	-6.456	0.0487	0.0012	0.0026
10121	0.006	-1.530	-8.231	0.0463	0.0012	0.0018
10122	0.019	-1.918	-8.667	0.0228	0.0005	-0.0005
10130	-0.373	0.215	-2.311	0.0487	0.0012	0.0045
10135	-1.066	-0.000	-2.252	0.0487	0.0012	0.0038
10140	-2.831	-0.000	-2.101	0.0487	0.0012	-0.0009
10150	-4.155	-0.022	-1.988	0.0487	0.0012	-0.0006
10160	-4.596	-0.000	-1.950	0.0487	0.0012	0.0001
10170	-5.919	-0.019	-1.837	0.0487	0.0012	-0.0007
10180	-6.360	-0.000	-1.800	0.0487	0.0012	0.0006

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10190	-7.684	-0.078	-1.687	0.0487	0.0012	-0.0016
10200	-8.125	-0.000	-1.649	0.0487	0.0012	-0.0027
10210	-8.188	0.012	-1.643	0.0487	0.0012	-0.0027
10250	-0.078	-0.980	-6.371	0.0487	0.0012	0.0026
10260	-0.143	-0.656	-5.267	0.0487	0.0012	0.0031
10300	-0.232	0.258	-2.323	0.0487	0.0012	0.0045
11000	0.001	-0.284	-5.669	-0.0094	0.0000	-0.0352
11010	0.001	0.084	-2.022	0.0013	-0.0000	-0.0276
11020	0.001	0.074	1.623	-0.0011	0.0000	-0.0199
11030	-0.009	-0.356	5.270	0.0095	-0.0002	-0.0123
11040	-0.012	-1.611	8.926	-0.0133	0.0006	-0.0047
11041	0.005	-1.209	9.337	-0.0234	0.0009	-0.0038
11042	0.044	-0.273	9.151	-0.0978	0.0014	-0.0032
11100	0.008	-0.030	11.536	-0.0063	0.0000	-0.0089
11110	0.001	0.089	15.414	0.0023	-0.0001	-0.0089
11200	0.001	0.098	-5.515	-0.0061	0.0000	-0.0070
11210	-0.010	0.172	-2.216	0.0063	-0.0002	-0.0131
11211	-0.027	-0.596	-1.088	0.0140	-0.0002	-0.0152
11212	-0.035	-2.101	0.040	0.0229	0.0002	-0.0173
11213	0.026	-3.869	1.242	0.0106	0.0015	-0.0196
11214	0.190	-3.581	1.291	-0.0452	0.0050	-0.0213
12000	40.097	0.633	-0.813	0.0451	0.0078	0.0181

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
12008	29.675	4.632	-2.802	-0.1017	0.1815	0.2931
12009	28.290	4.804	-3.347	-0.1098	0.1981	0.2840
12010	27.054	4.524	-3.864	-0.1121	0.2237	0.2787
12015	27.042	4.518	-3.868	-0.1121	0.2238	0.2785
12017	18.278	0.885	-7.045	-0.0883	0.2588	0.2004
12018	12.352	-0.868	-9.254	-0.0551	0.2195	0.1461
12019	11.724	-0.832	-9.905	-0.0433	0.1848	0.1376
12020	11.797	-0.406	-10.666	-0.0374	0.1433	0.1220
12025	12.106	-0.000	-11.134	-0.0311	0.1295	0.1160
12029	12.877	0.790	-11.744	-0.0127	0.0571	0.0916
12030	13.115	0.939	-11.461	0.0032	-0.0012	0.0802
13000	16.406	0.011	-0.665	0.0694	-0.0045	0.0005
13008	11.806	4.010	-2.323	-0.0974	0.1119	0.1301
13009	11.139	4.194	-2.843	-0.1005	0.1236	0.1266
13010	10.441	3.961	-3.342	-0.0971	0.1422	0.1251
13018	0.090	-0.273	-8.731	-0.0407	0.1852	0.0609
13019	-0.458	-0.317	-9.358	-0.0325	0.1789	0.0572
13020	-0.391	-0.163	-10.154	-0.0286	0.1662	0.0494
13025	-0.082	-0.000	-10.716	-0.0248	0.1605	0.0460
13029	0.776	0.316	-11.637	-0.0138	0.1205	0.0320
13030	1.299	0.393	-11.465	-0.0043	0.0841	0.0254
14000	-19.038	-10.474	3.828	0.2040	0.0617	0.0390

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
14008	-13.415	-4.283	21.485	0.3512	0.2729	-0.0441
14009	-12.576	-5.469	22.227	0.3217	0.2461	-0.0609
14010	-12.549	-5.678	23.237	0.3011	0.2131	-0.0865
14013	-18.061	1.034	17.955	0.4022	0.3313	-0.0001
14014	-17.530	0.756	19.600	0.3918	0.3186	-0.0135
14015	-16.347	-0.544	20.546	0.3728	0.2966	-0.0202
14019	-17.432	-1.127	7.822	0.3291	0.4049	0.0464
14020	-17.721	-0.851	9.769	0.3681	0.3980	0.0314
14025	-15.731	-0.201	-0.125	0.2140	0.4140	0.0603
14028	-12.361	0.277	-7.048	0.0574	0.2558	0.0212
14029	-13.579	0.527	-6.924	0.0992	0.3183	0.0288
14030	-14.450	0.563	-5.750	0.1258	0.3736	0.0428
15000	4.844	-1.859	-0.566	-0.1487	0.0055	0.0075
15009	0.499	-0.090	-1.026	-0.0067	-0.0774	0.0039
15010	0.245	0.061	-0.693	0.0006	-0.0531	-0.0002
15020	0.242	0.061	-0.689	0.0006	-0.0529	-0.0002
15098	0.220	-0.459	-1.133	-0.0081	-0.0326	-0.0082
15099	0.193	-0.105	-1.027	-0.0067	-0.0292	-0.0050
15100	0.103	0.050	-0.695	-0.0008	-0.0212	-0.0050
15110	0.102	0.050	-0.690	-0.0007	-0.0211	-0.0050
16000	-6.729	-1.813	0.173	-0.0718	0.0045	0.0195
16009	-0.330	-0.095	-1.029	-0.0055	0.0619	-0.0005

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
16010	-0.149	0.055	-0.695	0.0002	0.0366	0.0034
16020	-0.147	0.055	-0.690	0.0003	0.0365	0.0033
17000	-7.219	-3.651	-0.928	0.1399	0.0150	0.0439
17008	-6.735	0.351	-0.842	-0.0629	0.0892	-0.0274
17009	-6.784	0.598	-1.217	-0.0561	0.0980	-0.0236
17010	-7.145	0.554	-1.642	-0.0419	0.1124	-0.0200
17018	-16.568	0.028	-7.036	0.0097	0.2130	-0.0086
17019	-17.271	0.051	-7.736	0.0080	0.2360	-0.0082
17020	-17.309	0.031	-8.806	0.0058	0.2522	-0.0093
17025	-16.999	-0.000	-9.675	0.0041	0.2542	-0.0101
17029	-15.961	-0.086	-11.349	0.0007	0.2424	-0.0141
17030	-14.942	-0.106	-11.378	-0.0023	0.2235	-0.0157
17099	-0.143	-0.148	-1.018	-0.0140	0.0273	-0.0096
17100	-0.054	0.030	-0.696	-0.0054	0.0149	-0.0056
17110	-0.053	0.030	-0.691	-0.0054	0.0149	-0.0056
18000	-4.402	-0.909	-0.099	-0.0966	-0.0002	0.0012
19000	4.590	-0.369	-1.291	0.0967	-0.0037	0.0104
19009	2.571	3.841	-2.457	-0.0840	0.1012	0.0438
19010	2.091	3.667	-2.931	-0.0817	0.1173	0.0445
19018	-7.003	0.084	-8.320	-0.0357	0.1798	0.0131
19019	-7.550	-0.018	-8.949	-0.0294	0.1848	0.0116
19020	-7.498	-0.024	-9.791	-0.0264	0.1840	0.0076

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DISPLACEMENTS REPORT: Nodal Movements
CASE 2 (OPE) W+D1+T1+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
19025	-7.189	-0.000	-10.419	-0.0238	0.1817	0.0057
19029	-6.281	0.045	-11.531	-0.0164	0.1564	-0.0029
19030	-5.601	0.086	-11.421	-0.0099	0.1305	-0.0069
19099	0.041	-0.181	-1.025	-0.0115	-0.0037	-0.0076
19100	0.032	-0.009	-0.700	-0.0047	-0.0051	-0.0055
19110	0.031	-0.009	-0.695	-0.0047	-0.0051	-0.0055

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9	-0.056	-1.644	-0.029	0.0015	0.0011	0.0045
10	-0.146	-1.645	-0.010	0.0007	0.0013	0.0048
18	-0.147	-1.645	-0.009	0.0007	0.0013	0.0048
19	-0.219	-1.630	-0.035	-0.0048	0.0011	0.0061
20	-0.240	-1.508	-0.077	-0.0130	0.0013	0.0064
30	-0.226	-1.379	-0.077	-0.0138	0.0014	0.0066
35	-0.212	-1.243	-0.077	-0.0151	0.0014	0.0058
40	-0.178	-0.863	-0.077	-0.0194	0.0015	0.0039
50	-0.173	-0.793	-0.077	-0.0194	0.0015	0.0039
60	-0.126	-0.197	-0.077	-0.0196	0.0016	0.0037
70	-0.120	-0.126	-0.077	-0.0195	0.0016	0.0037
75	-0.111	-0.000	-0.077	-0.0170	0.0016	0.0031
80	-0.103	0.080	-0.077	-0.0142	0.0016	0.0026
81	-0.085	0.193	-0.077	-0.0098	0.0016	0.0021
83	-0.075	0.241	-0.077	-0.0078	0.0016	0.0018
85	-0.014	0.356	-0.077	-0.0020	0.0017	0.0001
89	0.018	0.373	-0.076	-0.0001	0.0009	-0.0002
90	0.018	0.374	-0.069	-0.0008	0.0007	-0.0004
100	0.018	0.374	-0.069	-0.0008	0.0007	-0.0004
101	0.007	0.374	-0.044	-0.0007	0.0005	-0.0003

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
102	0.006	0.370	-0.047	0.0013	0.0004	-0.0002
105	-0.069	0.267	-0.077	-0.0066	0.0016	0.0016
110	-0.031	0.342	-0.077	-0.0025	0.0017	0.0005
119	-0.176	-1.125	-0.070	-0.0098	0.0017	0.0121
120	-0.090	-1.082	-0.010	-0.0048	0.0026	0.0052
125	-0.088	-1.082	-0.008	-0.0047	0.0026	0.0051
149	-0.023	-1.079	0.055	-0.0038	0.0017	0.0034
150	0.017	-1.077	0.106	-0.0032	0.0009	0.0018
160	0.017	-0.740	0.058	-0.0027	0.0008	0.0079
179	0.017	-0.405	0.032	-0.0023	0.0004	0.0068
180	0.017	-0.107	0.017	-0.0018	0.0003	0.0062
182	-0.066	-0.107	0.002	-0.0004	0.0005	0.0048
183	-0.132	-0.108	0.002	0.0002	0.0007	0.0041
189	0.017	-0.091	0.016	-0.0018	0.0003	0.0062
190	0.017	-0.074	0.015	-0.0018	0.0003	0.0062
220	0.017	-0.962	0.112	-0.0027	-0.0003	-0.0060
229	0.017	-0.659	0.090	-0.0021	-0.0007	-0.0079
230	0.016	-0.347	0.057	-0.0015	-0.0008	-0.0064
231	0.099	-0.348	0.044	-0.0005	-0.0009	-0.0047
232	0.164	-0.348	0.036	-0.0008	-0.0011	-0.0039
240	0.016	-0.099	0.021	-0.0011	-0.0005	-0.0028
249	0.016	-0.033	0.007	-0.0009	-0.0002	-0.0010

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
250	0.016	-0.014	0.002	-0.0006	-0.0001	-0.0003
252	0.020	-0.015	-0.003	-0.0001	-0.0001	-0.0001
253	0.021	-0.015	-0.003	0.0001	-0.0001	-0.0001
260	0.016	0.002	0.001	-0.0004	0.0000	-0.0002
269	0.016	0.007	0.003	-0.0003	0.0001	-0.0000
270	0.016	0.002	0.006	-0.0002	0.0001	0.0003
272	0.011	0.002	0.006	0.0001	0.0000	0.0004
273	0.005	0.002	0.008	-0.0000	0.0000	0.0003
289	0.016	-0.039	0.008	-0.0001	0.0000	0.0008
290	0.016	-0.101	0.009	-0.0000	0.0000	0.0010
292	0.002	-0.101	0.010	0.0001	0.0000	0.0008
293	-0.010	-0.102	0.009	-0.0002	0.0001	0.0008
299	0.016	-0.103	0.009	-0.0000	0.0000	0.0010
300	0.016	-0.106	0.009	-0.0000	0.0000	0.0010
338	-0.014	0.336	-0.094	-0.0079	0.0022	-0.0025
339	-0.020	0.277	-0.108	-0.0142	0.0025	-0.0072
340	-0.073	-0.177	0.013	-0.0093	-0.0009	0.0020
341	-0.068	-0.140	-0.065	-0.0184	0.0006	-0.0039
346	-0.058	-0.178	0.061	-0.0079	-0.0008	0.0030
349	0.004	-0.179	0.153	-0.0053	-0.0005	0.0055
350	0.100	-0.181	0.218	-0.0042	-0.0002	0.0076
360	-0.034	0.147	-0.114	-0.0228	0.0021	-0.0083

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
379	0.099	-1.233	0.057	-0.0026	0.0022	-0.0151
380	0.099	-1.266	0.052	-0.0026	0.0022	-0.0151
382	0.254	-1.203	0.029	-0.0023	0.0014	-0.0068
383	0.303	-1.207	-0.008	-0.0030	0.0007	-0.0005
400	0.101	-1.308	0.137	-0.0025	-0.0016	0.0096
410	0.102	-1.404	0.069	-0.0014	-0.0013	-0.0032
420	0.103	-1.180	0.030	-0.0004	-0.0006	-0.0067
429	0.104	-0.825	0.010	-0.0000	-0.0003	-0.0077
430	0.105	-0.621	0.002	0.0004	-0.0001	0.0002
440	0.106	-0.745	0.005	0.0008	0.0002	0.0017
449	0.107	-0.665	0.007	0.0007	-0.0000	-0.0035
450	0.107	-0.578	0.003	0.0007	-0.0001	0.0014
460	0.110	-0.877	0.005	-0.0012	0.0009	0.0117
469	0.111	-1.638	0.085	-0.0021	0.0027	0.0168
470	0.111	-1.675	0.091	-0.0021	0.0027	0.0168
489	-0.045	-1.605	0.038	-0.0037	0.0073	0.0065
490	-0.104	-1.608	-0.032	-0.0062	0.0118	0.0034
509	-0.167	-1.592	-0.168	-0.0168	0.0147	0.0145
510	-0.138	-1.502	-0.200	-0.0346	0.0141	0.0185
540	-0.137	-1.500	-0.200	-0.0347	0.0141	0.0185
550	0.307	-0.399	-0.200	-0.0350	0.0140	0.0187
559	0.348	-0.237	-0.215	-0.0319	0.0072	0.0196

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
560	0.356	-0.115	-0.228	-0.0272	-0.0001	0.0171
565	0.356	-0.000	-0.210	-0.0198	-0.0046	0.0109
570	0.357	0.092	-0.050	-0.0029	-0.0145	0.0097
578	0.164	0.070	-0.050	0.0038	-0.0121	0.0080
579	0.111	0.053	-0.043	0.0049	-0.0099	0.0070
580	0.073	0.044	-0.024	0.0049	-0.0083	0.0056
590	0.008	0.009	0.000	0.0031	-0.0031	0.0020
600	0.000	0.000	0.000	0.0000	-0.0000	0.0000
620	0.406	0.081	-0.050	-0.0024	-0.0167	0.0148
630	0.936	0.009	-0.050	-0.0022	-0.0168	0.0154
635	1.015	-0.000	-0.050	-0.0040	-0.0165	0.0231
680	-0.010	-1.503	-0.022	0.0016	-0.0001	0.0089
690	-0.010	-1.758	-0.025	0.0016	-0.0001	0.0079
691	-0.010	-1.888	-0.026	0.0017	-0.0000	0.0062
692	-0.024	-1.934	-0.017	0.0017	0.0002	0.0003
700	0.017	-1.925	0.006	0.0019	0.0003	-0.0070
704	0.045	-1.925	0.013	0.0019	0.0003	-0.0077
705	0.140	-1.926	0.034	0.0019	0.0004	-0.0098
707	0.862	-1.927	0.132	0.0022	0.0007	-0.0198
709	2.409	-1.745	0.270	0.0026	0.0007	-0.0378
710	2.613	-1.236	0.292	0.0027	0.0007	-0.0436
719	2.387	-0.284	0.293	0.0028	0.0007	-0.0435

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
720	1.878	-0.067	0.261	0.0030	0.0007	-0.0394
730	1.871	-0.067	0.260	0.0030	0.0007	-0.0393
740	0.176	-1.926	0.040	0.0019	0.0004	-0.0105
745	0.728	-1.927	0.117	0.0021	0.0006	-0.0184
750	-0.010	-0.665	-0.005	0.0014	-0.0002	0.0065
754	-0.010	-0.542	-0.001	0.0013	-0.0002	0.0055
755	-0.010	-0.496	0.000	0.0013	-0.0002	0.0051
760	-0.010	-0.196	0.012	0.0011	-0.0001	0.0014
769	-0.010	-0.171	0.013	0.0011	-0.0000	0.0011
770	-0.010	-0.162	0.013	0.0011	-0.0000	0.0009
780	-0.010	-0.116	0.013	0.0009	0.0000	0.0003
789	-0.010	-0.110	0.012	0.0009	0.0000	0.0003
790	-0.010	-0.107	0.012	0.0009	0.0001	0.0003
800	-0.010	-0.095	0.008	0.0008	0.0001	-0.0001
810	-0.010	-0.157	0.005	0.0008	0.0000	-0.0015
820	-0.010	-0.342	0.008	0.0007	-0.0001	-0.0025
829	-0.010	-0.379	0.009	0.0007	-0.0001	-0.0026
830	-0.010	-0.386	0.009	0.0007	-0.0001	-0.0026
831	0.025	-0.373	0.013	-0.0002	-0.0009	-0.0018
832	0.047	-0.374	0.001	-0.0014	-0.0018	-0.0011
885	0.143	-0.000	0.025	0.0008	-0.0028	-0.0048
890	0.130	-0.012	0.025	0.0018	-0.0029	-0.0054

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
900	0.038	-0.063	0.025	0.0013	-0.0029	-0.0054
910	0.029	-0.061	0.025	-0.0011	-0.0031	-0.0058
918	-0.010	-0.040	0.025	-0.0018	-0.0023	-0.0042
919	-0.011	-0.033	0.021	-0.0022	-0.0018	-0.0038
920	-0.001	-0.029	0.013	-0.0024	-0.0016	-0.0030
930	0.002	-0.007	-0.000	-0.0021	-0.0008	-0.0014
940	0.000	-0.000	-0.000	-0.0000	-0.0000	-0.0000
958	0.055	-0.287	-0.097	-0.0270	-0.0051	0.0147
959	0.036	-0.160	-0.089	-0.0249	-0.0049	0.0150
960	0.029	-0.069	-0.071	-0.0209	-0.0046	0.0113
965	0.029	-0.000	-0.038	-0.0148	-0.0043	0.0043
970	0.055	-0.289	-0.097	-0.0270	-0.0051	0.0147
980	0.216	-1.137	-0.097	-0.0266	-0.0051	0.0146
1008	0.282	-1.210	-0.052	-0.0045	0.0001	0.0039
1009	0.251	-1.200	-0.075	-0.0103	-0.0023	0.0114
1010	0.216	-1.138	-0.097	-0.0266	-0.0051	0.0146
1044	0.069	-0.724	0.016	0.0016	0.0009	0.0037
1045	-0.001	-0.728	0.043	0.0020	0.0020	0.0060
1048	-0.087	-0.732	0.068	0.0019	0.0028	0.0083
1049	-0.122	-0.735	0.073	-0.0010	0.0021	0.0124
1050	-0.136	-0.713	0.068	-0.0151	0.0017	0.0140
1080	-0.136	-0.712	0.068	-0.0152	0.0017	0.0140

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1090	-0.081	-0.226	0.068	-0.0155	0.0017	0.0141
1099	-0.075	-0.140	0.066	-0.0156	0.0015	0.0143
1100	-0.073	-0.065	0.060	-0.0130	0.0013	0.0108
1105	-0.073	-0.000	0.052	-0.0092	0.0012	0.0038
1110	-0.073	-0.068	0.031	-0.0005	0.0014	-0.0060
1225	-0.131	-0.000	0.031	0.0010	0.0014	-0.0047
1230	-0.124	-0.013	0.031	0.0019	0.0015	-0.0054
1240	-0.078	-0.069	0.031	0.0015	0.0015	-0.0055
1248	-0.051	-0.049	0.031	-0.0020	0.0016	-0.0047
1249	-0.038	-0.040	0.027	-0.0027	0.0014	-0.0043
1250	-0.021	-0.035	0.016	-0.0030	0.0012	-0.0035
1260	-0.001	-0.009	-0.000	-0.0026	0.0004	-0.0015
1270	-0.000	-0.000	-0.000	-0.0000	0.0000	-0.0000
1294	0.165	-1.184	0.028	-0.0002	0.0001	-0.0019
1295	0.160	-1.188	0.021	-0.0011	0.0008	0.0024
1298	0.109	-1.191	-0.001	-0.0027	0.0013	0.0061
1299	0.075	-1.183	-0.019	-0.0090	-0.0003	0.0125
1300	0.049	-1.125	-0.038	-0.0260	-0.0016	0.0152
1330	0.049	-1.124	-0.038	-0.0261	-0.0016	0.0152
1340	-0.003	-0.293	-0.038	-0.0265	-0.0016	0.0153
1349	-0.009	-0.166	-0.035	-0.0246	-0.0019	0.0155
1350	-0.012	-0.073	-0.027	-0.0207	-0.0022	0.0119

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1355	-0.012	-0.000	-0.011	-0.0147	-0.0022	0.0047
1360	-0.012	-0.059	0.022	-0.0011	-0.0016	-0.0058
1425	0.051	-0.000	0.022	0.0009	-0.0017	-0.0050
1430	0.043	-0.012	0.022	0.0017	-0.0016	-0.0055
1440	-0.007	-0.061	0.022	0.0013	-0.0016	-0.0055
1448	-0.029	-0.038	0.022	-0.0018	-0.0008	-0.0045
1449	-0.025	-0.031	0.019	-0.0020	-0.0005	-0.0041
1450	-0.011	-0.028	0.012	-0.0022	-0.0005	-0.0034
1460	0.000	-0.007	-0.000	-0.0021	-0.0002	-0.0015
1470	-0.000	-0.000	-0.000	-0.0000	-0.0000	-0.0000
1499	-0.190	-0.107	0.001	-0.0012	0.0010	0.0036
1500	-0.192	-0.099	-0.001	-0.0027	0.0012	0.0034
1510	-0.062	-0.953	-0.001	0.0077	0.0012	0.0017
1550	-0.000	-0.000	-0.000	-0.0000	0.0000	0.0000
1598	0.207	-0.348	0.021	-0.0020	-0.0012	-0.0037
1599	0.219	-0.342	0.008	-0.0052	-0.0013	-0.0034
1600	0.218	-0.315	-0.002	-0.0086	-0.0015	-0.0033
1610	0.068	-0.839	-0.001	0.0085	-0.0014	-0.0017
1650	0.000	-0.000	-0.000	-0.0000	-0.0000	-0.0000
1698	0.022	-0.015	-0.001	0.0002	-0.0001	-0.0001
1699	0.022	-0.016	-0.000	-0.0000	-0.0001	-0.0001
1700	0.021	-0.015	-0.000	-0.0005	-0.0001	-0.0000

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1710	0.007	-0.998	-0.000	0.0074	-0.0001	-0.0000
1750	0.000	-0.000	-0.000	-0.0000	-0.0000	-0.0000
1798	0.002	0.002	0.006	-0.0004	0.0000	0.0003
1799	0.000	0.004	0.002	-0.0014	0.0000	0.0003
1800	0.000	0.010	-0.000	-0.0015	0.0000	0.0003
1810	0.000	-0.854	-0.000	0.0112	-0.0000	0.0002
1850	0.000	-0.000	-0.000	-0.0000	-0.0000	0.0000
1925	-0.053	-0.000	0.032	0.0011	-0.0002	-0.0054
1930	-0.053	-0.013	0.032	0.0020	0.0000	-0.0059
1940	-0.052	-0.072	0.032	0.0016	0.0001	-0.0060
1950	-0.051	-0.071	0.032	-0.0005	0.0002	-0.0064
1958	-0.045	-0.051	0.033	-0.0021	0.0006	-0.0050
1959	-0.035	-0.041	0.029	-0.0027	0.0006	-0.0045
1960	-0.019	-0.037	0.018	-0.0031	0.0005	-0.0037
1970	-0.001	-0.009	-0.000	-0.0027	0.0002	-0.0016
1980	-0.000	-0.000	-0.000	-0.0000	0.0000	-0.0000
1989	0.071	-0.749	0.019	0.0012	0.0012	0.0032
1990	0.010	-0.753	0.038	0.0013	0.0022	0.0054
1998	-0.070	-0.757	0.053	0.0011	0.0031	0.0078
1999	-0.103	-0.759	0.056	-0.0017	0.0022	0.0120
2000	-0.116	-0.734	0.049	-0.0158	0.0018	0.0137
2030	-0.116	-0.733	0.049	-0.0158	0.0018	0.0138

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2040	-0.059	-0.227	0.049	-0.0162	0.0018	0.0138
2049	-0.053	-0.139	0.047	-0.0162	0.0013	0.0141
2050	-0.051	-0.063	0.043	-0.0135	0.0008	0.0106
2060	-0.051	-0.000	0.038	-0.0095	0.0005	0.0036
2098	-0.018	-0.102	0.006	-0.0005	0.0001	0.0007
2099	-0.021	-0.100	0.002	-0.0015	0.0001	0.0007
2100	-0.021	-0.092	-0.000	-0.0026	0.0001	0.0006
2110	-0.007	-0.957	-0.000	0.0077	0.0001	0.0003
2150	-0.000	-0.000	-0.000	-0.0000	0.0000	0.0000
2199	-0.456	0.235	-0.436	0.0060	0.0022	0.0058
2200	-0.456	0.209	-0.427	0.0130	0.0026	0.0055
2205	-0.422	-0.000	-0.427	0.0219	0.0030	0.0048
2210	-0.308	-0.791	-0.458	0.0315	0.0094	0.0043
2211	-0.317	-0.764	-0.434	0.0321	0.0072	0.0035
2214	-0.320	-0.479	-0.857	0.0262	0.0099	0.0088
2215	-0.346	-0.399	-0.868	0.0230	0.0088	0.0074
2220	-0.526	-0.000	-0.868	0.0070	0.0065	0.0042
2225	-0.614	0.012	-0.868	0.0003	0.0040	0.0019
2240	-0.615	-0.000	-0.965	0.0058	0.0033	-0.0021
2300	-0.614	-0.000	-0.850	0.0020	0.0033	0.0020
2310	-0.615	-0.000	-0.782	0.0062	0.0016	-0.0026
2320	-0.424	-0.008	-0.513	0.0269	0.0000	-0.0204

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CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2500	-0.235	-0.008	-0.264	0.0272	-0.0000	-0.0206
2504	-0.099	-0.010	-0.083	0.0374	-0.0005	-0.0277
2508	0.032	-0.010	0.094	0.0376	-0.0005	-0.0278
2510	0.032	-0.136	0.096	0.0377	-0.0005	-0.0278
2520	0.032	-0.209	0.098	0.0389	-0.0006	-0.0267
2540	0.032	-0.294	0.100	0.0393	-0.0007	-0.0260
2545	0.032	-0.521	0.106	0.0394	-0.0007	-0.0259
2548	0.065	-0.242	0.121	0.0396	-0.0040	-0.0197
2549	0.062	-0.098	0.083	0.0241	-0.0044	-0.0155
2550	0.047	-0.412	0.117	0.0405	-0.0038	-0.0197
2551	0.034	-0.540	0.111	0.0416	-0.0021	-0.0199
2555	0.038	-0.040	0.036	0.0092	0.0017	-0.0063
2560	0.000	-0.000	0.000	0.0000	0.0000	-0.0000
3000	-0.439	-0.008	-0.654	0.0310	-0.0020	-0.0197
3010	-0.256	-0.008	-0.366	0.0313	-0.0021	-0.0199
3020	-0.122	-0.010	-0.167	0.0397	-0.0039	-0.0280
3040	0.011	-0.010	0.020	0.0398	-0.0039	-0.0282
3050	0.011	-0.138	0.038	0.0399	-0.0039	-0.0282
3060	0.011	-0.212	0.049	0.0408	-0.0040	-0.0271
3080	0.011	-0.298	0.062	0.0411	-0.0041	-0.0264
3090	0.011	-0.529	0.097	0.0411	-0.0041	-0.0263
3099	0.017	-0.547	0.113	0.0432	-0.0046	-0.0202

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
3100	0.036	-0.415	0.121	0.0415	-0.0052	-0.0201
3108	0.058	-0.241	0.121	0.0404	-0.0053	-0.0200
3109	0.059	-0.095	0.081	0.0243	-0.0051	-0.0157
3110	0.035	-0.037	0.033	0.0089	0.0015	-0.0061
3120	0.000	-0.000	-0.000	0.0000	0.0000	0.0000
3200	-0.455	-0.008	-0.599	0.0282	-0.0017	-0.0207
3210	-0.263	-0.008	-0.337	0.0286	-0.0018	-0.0210
3220	-0.125	-0.010	-0.149	0.0385	-0.0034	-0.0281
3240	0.008	-0.010	0.032	0.0386	-0.0035	-0.0282
3250	0.008	-0.138	0.048	0.0388	-0.0035	-0.0282
3260	0.008	-0.212	0.058	0.0398	-0.0036	-0.0270
3280	0.008	-0.298	0.069	0.0402	-0.0037	-0.0263
3290	0.008	-0.527	0.101	0.0403	-0.0037	-0.0262
3299	0.014	-0.546	0.117	0.0425	-0.0046	-0.0200
3300	0.034	-0.415	0.124	0.0412	-0.0056	-0.0197
3309	0.060	-0.097	0.084	0.0244	-0.0053	-0.0155
3310	0.037	-0.038	0.035	0.0090	0.0014	-0.0062
3320	-0.000	-0.000	0.000	0.0000	0.0000	-0.0000
4000	1.535	-0.066	0.234	0.0031	0.0007	-0.0383
4005	1.525	-0.000	0.234	0.0026	0.0007	-0.0373
4010	1.473	-0.000	0.234	-0.0009	0.0007	-0.0323
4020	1.411	-0.000	0.234	0.0001	0.0007	-0.0262

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
4030	1.348	-0.000	0.234	0.0005	0.0007	-0.0200
4040	1.291	-0.000	0.234	-0.0017	0.0007	-0.0145
4050	1.199	-0.000	0.234	0.0013	0.0007	-0.0056
4100	1.541	-0.091	0.234	0.0023	0.0007	-0.0375
4110	1.543	-0.098	0.234	0.0020	0.0007	-0.0372
4120	1.593	-0.000	0.234	-0.0019	0.0006	-0.0299
4130	1.665	-0.000	0.234	0.0051	0.0006	-0.0193
4140	1.702	-0.531	0.234	0.0100	0.0006	-0.0138
4150	1.711	-0.681	0.234	0.0101	0.0006	-0.0138
4229	-0.096	-0.593	0.015	0.0009	-0.0005	0.0050
4230	-0.175	-0.594	0.024	0.0002	-0.0008	0.0050
4299	-0.031	-0.182	0.026	0.0005	-0.0004	0.0014
4300	-0.056	-0.183	0.024	-0.0010	-0.0007	0.0018
4399	-0.015	-0.114	0.021	-0.0001	-0.0008	0.0004
4400	-0.024	-0.115	0.007	-0.0017	-0.0016	0.0007
5000	-0.615	-0.020	-0.994	0.0058	0.0033	-0.0022
5260	0.000	0.012	-0.000	0.0000	0.0000	0.0005
5495	-0.103	-0.071	-0.106	-0.0163	0.0031	-0.0208
5500	-0.130	-0.389	-0.142	-0.0098	0.0060	-0.0255
5501	-0.110	-0.285	-0.133	-0.0181	0.0049	-0.0285
5510	-0.131	-0.390	-0.142	-0.0097	0.0060	-0.0255
5520	-0.215	-0.523	-0.142	-0.0092	0.0060	-0.0253

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
5530	-0.401	-0.217	-0.142	0.0207	0.0048	-0.0144
5540	-0.412	-0.167	-0.142	0.0207	0.0048	-0.0143
5550	-0.421	-0.127	-0.142	0.0208	0.0046	-0.0137
5559	-0.425	-0.019	-0.114	0.0147	0.0039	-0.0115
5560	-0.396	-0.000	-0.079	0.0044	0.0045	-0.0070
5570	-0.396	-0.000	-0.078	0.0043	0.0045	-0.0070
5580	-0.282	-0.000	-0.009	0.0041	0.0044	-0.0068
5590	-0.259	-0.001	0.004	0.0033	0.0041	-0.0064
5595	0.038	-0.004	0.040	-0.0012	0.0014	-0.0041
5599	0.132	-0.000	0.006	-0.0012	-0.0000	-0.0034
5600	0.135	0.003	0.004	0.0006	-0.0017	-0.0029
5605	0.127	-0.000	0.003	0.0009	-0.0018	-0.0029
5609	0.018	-0.018	0.002	-0.0009	-0.0012	-0.0030
5610	0.007	-0.007	0.001	-0.0003	-0.0005	-0.0011
5620	0.000	-0.000	0.000	-0.0000	-0.0000	0.0000
6000	-0.615	0.007	-0.778	0.0062	0.0016	-0.0026
6100	0.000	-0.000	-0.000	0.0000	0.0000	-0.0036
6110	0.000	-0.000	-0.000	0.0000	0.0000	0.0115
6120	0.000	-0.000	-0.000	0.0000	0.0000	-0.0000
6130	0.000	-0.000	-0.000	-0.0000	-0.0000	-0.0012
7000	1.136	-0.000	0.234	0.0007	0.0007	0.0006
7010	1.068	-0.000	0.234	-0.0054	0.0007	0.0072

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7030	1.003	-0.804	0.223	-0.0102	0.0007	0.0147
7031	1.007	-0.928	0.231	-0.0105	0.0007	0.0136
7032	1.015	-0.861	0.234	-0.0114	0.0007	0.0124
7040	1.003	-0.000	0.183	-0.0102	0.0007	0.0073
7050	1.003	0.093	0.163	-0.0102	0.0007	0.0009
7060	1.003	-0.000	0.103	-0.0102	0.0007	-0.0016
7070	1.003	-0.061	0.083	-0.0102	0.0007	-0.0016
7080	1.003	-0.000	0.023	-0.0102	0.0007	-0.0005
7090	1.003	-0.069	0.003	-0.0102	0.0007	-0.0025
7100	1.003	-0.000	-0.057	-0.0102	0.0007	0.0039
7110	1.003	0.013	-0.060	-0.0102	0.0007	0.0039
7199	1.831	-0.380	0.337	0.0095	0.0005	-0.0117
7200	1.845	-0.307	0.353	0.0092	0.0005	-0.0101
7210	1.845	-0.000	0.371	0.0080	0.0005	-0.0045
7220	1.845	-0.000	0.404	0.0057	0.0005	0.0020
7230	1.845	-0.000	0.461	0.0017	0.0005	0.0006
7240	1.845	-0.076	0.515	-0.0021	0.0004	-0.0029
7250	1.842	-0.094	0.515	-0.0012	0.0004	-0.0029
7260	1.841	-0.100	0.514	0.0018	0.0004	-0.0030
7270	1.829	-0.049	0.514	0.0019	0.0004	-0.0030
7280	1.823	-0.000	0.514	0.0022	0.0004	-0.0031
7290	1.819	0.011	0.514	0.0008	0.0004	-0.0032

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7295	1.788	0.001	0.514	-0.0001	0.0004	-0.0037
7300	1.784	-0.000	0.514	-0.0006	0.0004	-0.0037
7320	1.745	-0.000	0.514	0.0001	0.0004	-0.0044
7330	1.706	-0.000	0.514	-0.0000	0.0004	-0.0050
7340	1.667	-0.000	0.514	-0.0000	0.0004	-0.0056
7350	1.628	-0.000	0.514	0.0001	0.0004	-0.0063
7370	1.589	-0.000	0.514	-0.0006	0.0004	-0.0069
7373	1.585	-0.014	0.514	-0.0014	0.0004	-0.0070
7376	1.554	-0.021	0.514	0.0022	0.0004	-0.0075
7380	1.550	-0.000	0.514	0.0022	0.0004	-0.0075
7400	1.511	-0.000	0.514	-0.0089	0.0004	-0.0082
7409	1.488	-0.798	0.516	-0.0201	0.0004	-0.0084
7410	1.487	-0.795	0.520	-0.0203	0.0004	-0.0093
7415	1.487	-0.000	0.553	-0.0222	0.0004	-0.0086
7419	1.485	-0.004	0.559	-0.0228	0.0004	-0.0052
7420	1.481	-0.196	0.561	-0.0207	0.0004	-0.0052
7430	1.453	-0.959	0.561	-0.0000	0.0004	-0.0053
7438	1.425	-0.195	0.561	0.0208	0.0004	-0.0054
7439	1.421	-0.002	0.559	0.0229	0.0004	-0.0053
7440	1.419	0.032	0.555	0.0225	0.0004	-0.0080
7445	1.419	-0.000	0.553	0.0224	0.0004	-0.0087
7449	1.417	-0.817	0.516	0.0205	0.0004	-0.0089

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7450	1.413	-0.662	0.514	0.0191	0.0004	-0.0090
7460	1.394	-0.000	0.514	0.0093	0.0004	-0.0090
7480	1.355	-0.000	0.514	-0.0031	0.0004	-0.0090
7482	1.351	-0.034	0.514	-0.0032	0.0004	-0.0090
7485	1.320	-0.034	0.514	0.0035	0.0004	-0.0090
7490	1.316	-0.000	0.514	0.0037	0.0004	-0.0090
7500	1.314	0.019	0.514	0.0037	0.0004	-0.0090
7600	1.849	-0.049	0.515	-0.0027	0.0004	-0.0030
7610	1.858	-0.011	0.510	-0.0018	0.0004	-0.0031
7615	1.860	-0.000	0.510	-0.0002	0.0004	-0.0032
7620	1.867	-0.027	0.513	0.0039	0.0004	-0.0036
7650	1.876	-0.115	0.513	0.0040	0.0004	-0.0036
7660	1.901	-0.000	0.513	-0.0051	0.0004	-0.0070
7670	1.933	-0.000	0.513	0.0158	0.0003	-0.0118
7679	1.951	-1.554	0.514	0.0337	0.0003	-0.0151
7680	1.952	-1.540	0.516	0.0333	0.0003	-0.0169
7690	1.952	-0.000	0.537	0.0326	0.0003	-0.0175
7699	1.953	0.110	0.540	0.0326	0.0002	-0.0133
7700	1.954	-0.089	0.541	0.0300	0.0002	-0.0135
7708	1.979	-0.093	0.541	-0.0300	0.0002	-0.0134
7709	1.980	0.107	0.540	-0.0327	0.0002	-0.0132
7710	1.980	0.108	0.539	-0.0328	0.0002	-0.0156

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7720	1.980	-0.000	0.538	-0.0329	0.0002	-0.0173
7728	1.980	-1.553	0.528	-0.0342	0.0001	-0.0180
7729	1.981	-1.576	0.527	-0.0344	0.0001	-0.0170
7730	1.981	-1.369	0.527	-0.0338	0.0001	-0.0170
7740	1.986	-0.000	0.527	-0.0158	0.0001	-0.0170
7750	1.992	-0.000	0.527	0.0041	0.0001	-0.0170
7760	1.996	-0.000	0.527	-0.0011	0.0000	-0.0170
7770	1.997	-0.000	0.527	0.0004	0.0000	-0.0170
7780	1.998	-0.004	0.527	-0.0006	0.0000	-0.0170
7790	1.999	-0.000	0.527	0.0003	0.0000	-0.0170
7800	2.000	-0.000	0.527	-0.0001	0.0000	-0.0170
7810	2.000	-0.000	0.527	0.0000	0.0000	-0.0170
7820	2.000	-0.000	0.527	-0.0000	-0.0000	-0.0170
7830	2.000	-0.000	0.527	0.0001	-0.0000	-0.0170
7840	2.000	-0.000	0.527	-0.0003	-0.0000	-0.0170
7850	2.000	-0.006	0.527	0.0007	-0.0000	-0.0170
7860	2.000	0.000	0.527	-0.0003	-0.0000	-0.0170
7870	2.000	-0.000	0.527	0.0010	-0.0000	-0.0170
7880	2.000	-0.000	0.527	-0.0040	-0.0000	-0.0170
7890	2.000	0.021	0.527	-0.0039	-0.0000	-0.0170
8000	-0.020	-0.056	-0.000	-0.0031	0.0001	0.0006
8010	-0.017	-0.005	-0.000	-0.0030	0.0001	0.0006

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
8020	-0.016	-0.000	-0.000	0.0033	0.0001	0.0006
8100	0.000	0.023	-0.000	0.0005	0.0000	0.0003
8110	0.000	0.013	-0.000	0.0008	0.0000	0.0003
8120	0.000	-0.000	-0.000	0.0050	0.0000	0.0003
8200	0.019	-0.006	-0.000	-0.0008	-0.0002	-0.0000
8210	0.017	0.008	-0.000	-0.0007	-0.0002	-0.0000
8220	0.016	-0.000	-0.000	0.0052	-0.0002	-0.0000
8300	0.199	-0.201	-0.002	-0.0096	-0.0016	-0.0030
8310	0.172	-0.043	-0.002	-0.0094	-0.0016	-0.0030
8320	0.162	-0.000	-0.002	-0.0024	-0.0016	-0.0029
8400	-0.176	-0.061	-0.001	-0.0033	0.0013	0.0031
8410	-0.153	-0.006	-0.001	-0.0032	0.0013	0.0031
8420	-0.145	-0.000	-0.001	0.0031	0.0014	0.0030
9100	0.009	0.338	-0.058	0.0027	0.0001	-0.0002
9101	0.009	0.124	-0.057	0.0021	-0.0001	0.0002
9110	-0.031	0.356	-0.091	-0.0012	0.0011	0.0054
9119	-0.091	0.356	-0.103	-0.0011	0.0011	0.0054
9120	-0.198	0.357	-0.124	-0.0011	0.0012	0.0056
9129	-0.279	0.363	-0.138	-0.0007	0.0010	0.0066
9130	-0.306	0.359	-0.139	0.0025	0.0009	0.0070
9140	-0.261	0.154	-0.139	0.0089	0.0010	0.0076
9150	-0.246	-0.000	-0.139	0.0133	0.0010	0.0077

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9160	-0.225	-0.340	-0.139	0.0170	0.0011	0.0080
9180	-0.225	-0.434	-0.128	0.0172	0.0011	0.0095
9190	-0.225	-0.554	-0.116	0.0177	0.0012	0.0112
9199	-0.220	-0.785	-0.103	0.0188	0.0015	0.0164
9200	-0.206	-0.983	-0.097	0.0062	0.0015	0.0113
9210	-0.206	-0.984	-0.097	0.0062	0.0015	0.0113
9220	-0.196	-1.026	-0.097	0.0060	0.0015	0.0112
9230	-0.142	-0.902	-0.097	-0.0164	0.0014	0.0041
9240	-0.102	-0.429	-0.097	-0.0174	0.0014	0.0038
9250	-0.071	-0.000	-0.097	-0.0143	0.0014	-0.0004
9280	-0.050	0.141	-0.096	-0.0069	0.0014	-0.0033
9290	-0.040	0.189	-0.096	-0.0068	0.0014	-0.0034
9300	0.094	-0.000	-0.096	0.0107	0.0013	-0.0221
9310	0.221	-0.775	-0.095	-0.0072	0.0013	-0.0409
9320	0.230	-0.724	-0.095	-0.0074	0.0013	-0.0410
9330	0.281	-0.178	-0.095	-0.0156	0.0013	-0.0487
9335	0.294	-0.000	-0.095	-0.0108	0.0012	-0.0422
9340	0.281	-1.037	-0.116	-0.0172	0.0013	-0.0523
9345	0.281	-1.658	-0.131	-0.0172	0.0013	-0.0524
9350	0.272	-1.166	-0.116	-0.0167	0.0013	-0.0508
9360	0.234	-1.641	-0.116	-0.0157	0.0013	-0.0505
9370	0.062	-0.000	-0.115	0.0117	0.0015	-0.0236

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CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9378	-0.125	-0.820	-0.115	-0.0097	0.0014	0.0048
9379	-0.138	-0.876	-0.120	-0.0075	0.0012	0.0086
9380	-0.142	-0.779	-0.131	-0.0057	0.0011	0.0168
9390	-0.142	-0.109	-0.173	-0.0087	0.0011	0.0154
9500	0.298	0.023	-0.095	-0.0085	0.0012	-0.0402
9510	0.335	0.271	-0.095	-0.0082	0.0012	-0.0393
9519	0.346	0.210	-0.099	-0.0081	0.0010	-0.0310
9520	0.349	0.052	-0.108	-0.0103	0.0010	-0.0113
9530	0.349	0.051	-0.109	-0.0102	0.0010	-0.0113
9550	0.349	-0.054	-0.120	-0.0083	0.0011	-0.0100
9560	0.349	-0.146	-0.130	-0.0074	0.0011	-0.0100
9580	0.349	-0.246	-0.141	-0.0069	0.0011	-0.0102
9590	0.349	-0.356	-0.153	-0.0057	0.0012	-0.0102
9599	0.344	-0.448	-0.166	-0.0007	0.0015	-0.0049
9600	0.330	-0.404	-0.172	0.0125	0.0015	-0.0000
9610	0.329	-0.403	-0.172	0.0126	0.0015	-0.0000
9620	0.287	-0.049	-0.172	0.0124	0.0015	0.0001
9622	0.282	-0.000	-0.172	0.0097	0.0015	0.0002
9624	0.276	0.024	-0.172	0.0067	0.0015	0.0004
9627	0.264	0.076	-0.172	0.0064	0.0015	0.0005
9630	0.193	-0.047	-0.172	-0.0047	0.0015	0.0029
9640	0.182	-0.080	-0.172	-0.0047	0.0015	0.0029

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9650	0.172	-0.110	-0.172	-0.0037	0.0015	0.0033
9660	0.049	-0.000	-0.173	0.0007	0.0014	0.0078
9670	-0.087	-0.029	-0.173	0.0027	0.0012	0.0132
9680	-0.095	-0.010	-0.173	0.0027	0.0012	0.0132
9690	-0.130	-0.000	-0.173	-0.0060	0.0012	0.0148
9710	-0.150	-0.180	-0.173	-0.0082	0.0011	0.0138
9720	-0.181	-0.399	-0.173	-0.0074	0.0011	0.0135
9730	-0.204	-0.418	-0.173	0.0036	0.0011	0.0086
9800	-0.212	-0.392	-0.173	0.0037	0.0011	0.0085
9809	-0.222	-0.288	-0.169	0.0177	0.0010	0.0024
9810	-0.225	-0.225	-0.160	0.0176	0.0010	0.0051
9820	-0.225	-0.226	-0.160	0.0176	0.0010	0.0051
9840	-0.225	-0.278	-0.149	0.0171	0.0011	0.0066
9900	0.370	-0.000	-0.130	-0.0054	0.0011	-0.0098
9910	0.393	0.074	-0.130	-0.0026	0.0011	-0.0097
9920	0.417	0.110	-0.130	-0.0014	0.0010	-0.0096
9950	0.251	0.113	-0.130	-0.0000	0.0011	-0.0090
9951	0.376	0.114	-0.129	0.0001	0.0010	-0.0095
9960	0.249	0.113	-0.130	-0.0000	0.0011	-0.0090
9961	0.092	0.113	-0.130	0.0000	0.0011	-0.0090
9962	-0.027	0.111	-0.133	0.0005	0.0011	-0.0089
10000	0.370	0.111	-0.118	-0.0054	0.0011	-0.0098

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10010	-0.065	0.100	-0.137	0.0008	0.0008	-0.0089
10011	-0.017	0.037	-0.137	0.0006	0.0004	-0.0089
10012	-0.001	0.009	-0.137	0.0004	0.0002	-0.0089
10020	0.001	-0.002	-0.136	-0.0001	-0.0001	-0.0089
10029	0.001	-0.002	-0.136	-0.0001	-0.0001	-0.0089
10030	0.001	-0.002	-0.136	-0.0001	-0.0001	-0.0089
10070	-0.306	0.359	-0.139	0.0025	0.0009	0.0070
10080	-0.285	0.294	-0.139	0.0044	0.0009	0.0072
10100	-0.007	-1.643	-0.049	0.0021	0.0010	0.0044
10110	-0.113	-0.477	-0.176	-0.0041	0.0012	-0.0076
10111	-0.033	-0.167	-0.177	-0.0029	0.0007	-0.0063
10112	-0.003	-0.027	-0.178	-0.0016	0.0003	-0.0053
10120	0.400	-0.558	-0.350	-0.0028	0.0006	-0.0104
10121	0.034	-0.557	-0.247	-0.0029	0.0006	-0.0096
10122	-0.085	-0.536	-0.199	-0.0039	0.0010	-0.0080
10130	1.371	-0.555	-0.586	-0.0028	0.0006	-0.0124
10135	1.371	-0.000	-0.559	-0.0028	0.0006	-0.0071
10140	1.371	-0.000	-0.490	-0.0028	0.0006	0.0018
10150	1.371	-0.050	-0.438	-0.0028	0.0006	-0.0015
10160	1.371	-0.000	-0.420	-0.0028	0.0006	-0.0006
10170	1.371	-0.012	-0.369	-0.0028	0.0006	-0.0005
10180	1.371	-0.000	-0.351	-0.0028	0.0006	0.0008

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10190	1.371	-0.080	-0.299	-0.0028	0.0006	-0.0017
10200	1.371	-0.000	-0.282	-0.0028	0.0006	-0.0028
10210	1.371	0.012	-0.279	-0.0028	0.0006	-0.0028
10250	0.418	-0.558	-0.355	-0.0028	0.0006	-0.0104
10260	0.660	-0.558	-0.418	-0.0028	0.0006	-0.0110
10300	1.371	-0.677	-0.592	-0.0028	0.0006	-0.0124
11000	0.002	-0.010	-0.056	0.0005	-0.0001	0.0007
11010	-0.000	-0.007	-0.053	-0.0002	0.0000	0.0017
11020	0.000	-0.002	-0.051	0.0001	-0.0000	0.0027
11030	-0.005	-0.011	-0.049	-0.0001	-0.0001	0.0037
11040	0.030	0.225	-0.047	-0.0028	0.0007	0.0047
11041	0.047	0.298	-0.046	-0.0031	0.0008	0.0049
11042	0.034	0.343	-0.064	-0.0027	0.0012	0.0049
11100	0.006	-0.005	-0.137	0.0002	0.0001	-0.0089
11110	0.001	-0.003	-0.136	-0.0001	-0.0001	-0.0089
11200	0.008	0.051	-0.178	-0.0010	0.0001	-0.0043
11210	-0.002	0.095	-0.181	0.0010	-0.0001	-0.0007
11211	-0.007	-0.060	-0.183	0.0035	-0.0000	0.0005
11212	0.001	-0.526	-0.184	0.0086	0.0003	0.0017
11213	0.044	-1.447	-0.185	0.0117	0.0008	0.0030
11214	0.040	-1.603	-0.125	0.0087	0.0012	0.0033
12000	-0.010	-0.372	0.009	0.0007	-0.0001	-0.0026

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
12008	0.057	-0.375	-0.021	-0.0024	-0.0025	-0.0005
12009	0.062	-0.380	-0.032	-0.0033	-0.0026	0.0000
12010	0.072	-0.394	-0.038	-0.0034	-0.0029	0.0003
12015	0.072	-0.394	-0.038	-0.0034	-0.0029	0.0003
12017	0.193	-0.364	-0.038	0.0071	-0.0038	0.0030
12018	0.288	-0.104	-0.038	0.0124	-0.0039	0.0048
12019	0.303	-0.050	-0.032	0.0117	-0.0038	0.0049
12020	0.308	-0.014	-0.018	0.0106	-0.0037	0.0041
12025	0.308	-0.000	-0.005	0.0098	-0.0036	0.0035
12029	0.303	0.005	0.020	0.0079	-0.0033	0.0017
12030	0.292	-0.019	0.025	0.0057	-0.0030	0.0016
13000	-0.010	-0.113	0.012	0.0009	0.0000	0.0003
13008	-0.035	-0.116	-0.024	-0.0035	-0.0022	0.0011
13009	-0.037	-0.123	-0.041	-0.0053	-0.0023	0.0014
13010	-0.030	-0.146	-0.050	-0.0063	-0.0027	0.0016
13018	0.177	-0.082	-0.050	0.0090	-0.0041	0.0043
13019	0.193	-0.041	-0.043	0.0088	-0.0042	0.0043
13020	0.200	-0.012	-0.027	0.0081	-0.0042	0.0034
13025	0.200	-0.000	-0.013	0.0076	-0.0042	0.0028
13029	0.194	0.002	0.016	0.0065	-0.0037	0.0010
13030	0.181	-0.018	0.022	0.0049	-0.0033	0.0007
14000	-0.010	-1.659	-0.024	0.0016	-0.0001	0.0086

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
14008	0.800	-2.257	-0.005	0.0095	0.0129	-0.0040
14009	0.846	-2.280	0.013	0.0073	0.0106	-0.0072
14010	0.861	-2.254	0.047	0.0056	0.0074	-0.0121
14013	0.632	-2.101	-0.054	0.0082	0.0091	0.0107
14014	0.619	-2.116	-0.021	0.0096	0.0113	0.0049
14015	0.661	-2.154	-0.005	0.0101	0.0133	0.0018
14019	1.121	-2.046	-0.207	0.0015	0.0024	0.0386
14020	1.000	-2.100	-0.191	0.0045	0.0042	0.0267
14025	1.187	-1.110	-0.188	-0.0052	-0.0036	0.0566
14028	1.117	-0.040	-0.050	-0.0067	-0.0154	0.0334
14029	1.170	-0.131	-0.071	-0.0092	-0.0119	0.0413
14030	1.186	-0.324	-0.108	-0.0099	-0.0079	0.0514
15000	0.099	-1.199	0.062	-0.0026	0.0022	-0.0151
15009	0.006	-0.025	0.003	-0.0027	-0.0014	-0.0023
15010	0.005	-0.014	-0.001	-0.0025	-0.0010	-0.0018
15020	0.005	-0.014	-0.001	-0.0025	-0.0010	-0.0018
15098	-0.011	-0.028	0.011	-0.0022	-0.0004	-0.0034
15099	-0.001	-0.024	0.003	-0.0025	-0.0004	-0.0025
15100	0.002	-0.014	-0.001	-0.0024	-0.0003	-0.0020
15110	0.002	-0.014	-0.001	-0.0024	-0.0003	-0.0020
16000	0.111	-1.601	0.079	-0.0021	0.0027	0.0168
16009	0.043	0.037	-0.006	0.0048	-0.0067	0.0040

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
16010	0.017	0.020	0.002	0.0038	-0.0042	0.0028
16020	0.017	0.019	0.002	0.0038	-0.0042	0.0028
17000	-0.010	-0.592	-0.003	0.0013	-0.0002	0.0059
17008	-0.238	-0.595	0.024	-0.0004	-0.0011	0.0054
17009	-0.258	-0.596	0.021	-0.0010	-0.0011	0.0057
17010	-0.263	-0.601	0.019	-0.0007	-0.0012	0.0060
17018	-0.186	-0.146	0.019	0.0148	-0.0012	0.0087
17019	-0.182	-0.077	0.021	0.0137	-0.0010	0.0086
17020	-0.181	-0.025	0.024	0.0123	-0.0008	0.0074
17025	-0.181	-0.000	0.027	0.0113	-0.0007	0.0067
17029	-0.181	0.025	0.030	0.0092	-0.0002	0.0046
17030	-0.181	0.001	0.030	0.0067	0.0002	0.0042
17099	-0.008	-0.030	0.004	-0.0033	0.0009	-0.0026
17100	-0.002	-0.017	-0.001	-0.0031	0.0005	-0.0020
17110	-0.002	-0.017	-0.001	-0.0031	0.0005	-0.0020
18000	0.108	-0.720	-0.001	0.0007	-0.0001	0.0019
19000	-0.010	-0.181	0.013	0.0011	-0.0001	0.0012
19009	-0.088	-0.190	-0.011	-0.0044	-0.0010	0.0025
19010	-0.088	-0.209	-0.019	-0.0053	-0.0012	0.0027
19018	0.017	-0.091	-0.018	0.0097	-0.0025	0.0050
19019	0.027	-0.046	-0.014	0.0094	-0.0028	0.0050
19020	0.032	-0.014	-0.003	0.0085	-0.0030	0.0040

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DISPLACEMENTS REPORT: Nodal Movements
CASE 3 (SUS) W+P1

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
19025	0.031	-0.000	0.007	0.0080	-0.0030	0.0034
19029	0.027	0.006	0.028	0.0067	-0.0027	0.0014
19030	0.018	-0.015	0.032	0.0050	-0.0023	0.0011
19099	-0.006	-0.031	0.005	-0.0034	0.0004	-0.0027
19100	-0.001	-0.018	-0.000	-0.0032	0.0002	-0.0021
19110	-0.001	-0.018	-0.000	-0.0032	0.0002	-0.0021

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9	0.879	-1.204	-0.728	-0.0990	0.0061	-0.0294
10	1.451	-0.929	-2.666	-0.0978	0.0066	-0.0299
18	1.458	-0.926	-2.689	-0.0977	0.0066	-0.0299
19	1.946	-0.295	-3.759	-0.0572	0.0079	-0.0328
20	2.265	0.213	-3.794	-0.0072	0.0092	-0.0336
30	2.356	0.258	-3.622	-0.0042	0.0092	-0.0337
35	2.446	0.265	-3.450	-0.0003	0.0090	-0.0353
40	2.642	0.178	-3.050	0.0042	0.0080	-0.0390
50	2.670	0.163	-2.986	0.0042	0.0079	-0.0391
60	2.910	0.036	-2.441	0.0039	0.0078	-0.0393
70	2.937	0.022	-2.377	0.0038	0.0078	-0.0394
75	2.980	0.000	-2.278	0.0007	0.0071	-0.0405
80	3.019	0.015	-2.180	-0.0023	0.0063	-0.0416
81	3.079	0.083	-1.996	-0.0068	0.0053	-0.0429
83	3.110	0.141	-1.888	-0.0085	0.0048	-0.0437
85	3.214	0.564	-1.245	-0.0072	0.0018	-0.0434
89	2.956	0.088	-1.098	0.0739	-0.0020	-0.0456
90	2.285	-0.749	-2.611	0.1440	-0.0025	-0.0466
100	2.276	-0.753	-2.640	0.1440	-0.0025	-0.0466
101	0.854	-1.292	-7.191	0.1459	-0.0023	-0.0462

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
102	0.214	-2.190	-8.825	0.0858	-0.0012	-0.0431
105	3.128	0.187	-1.815	-0.0095	0.0043	-0.0437
110	3.196	0.462	-1.416	-0.0097	0.0023	-0.0435
119	2.641	-0.413	-3.727	-0.0378	0.0021	-0.0118
120	2.635	-0.579	-3.133	-0.0870	-0.0103	-0.0028
125	2.634	-0.585	-3.096	-0.0873	-0.0102	-0.0028
149	2.604	-0.804	-1.670	-0.0992	-0.0070	-0.0016
150	2.586	-1.023	-0.061	-0.1112	-0.0037	-0.0011
160	3.341	-0.974	-0.128	-0.1315	0.0057	0.0003
179	3.999	-1.020	-0.525	-0.1492	0.0107	-0.0011
180	4.658	-0.991	-1.061	-0.1668	0.0117	0.0036
182	4.311	-0.291	-4.136	-0.2260	0.0043	0.0363
183	3.637	0.410	-7.831	-0.2479	-0.0032	0.0465
189	4.696	-0.982	-1.091	-0.1668	0.0117	0.0036
190	4.734	-0.972	-1.122	-0.1668	0.0117	0.0036
220	2.094	-0.928	-0.208	-0.1337	-0.0048	-0.0029
229	1.507	-0.834	-0.409	-0.1606	-0.0043	-0.0020
230	0.920	-0.753	-0.533	-0.1875	-0.0010	-0.0022
231	0.893	-0.052	-3.872	-0.2402	-0.0019	0.0045
232	0.800	0.648	-7.741	-0.2567	-0.0027	0.0066
240	0.141	-0.609	-0.478	-0.2040	0.0015	-0.0015
249	-0.399	-0.599	-0.436	-0.2155	0.0010	0.0004

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
250	-0.940	-0.611	-0.393	-0.2270	0.0015	-0.0003
252	-0.879	0.090	-4.074	-0.2488	0.0022	-0.0066
253	-0.757	0.791	-7.924	-0.2489	0.0029	-0.0084
260	-1.720	-0.614	-0.303	-0.2346	0.0009	0.0017
269	-2.261	-0.732	-0.296	-0.2399	-0.0003	0.0037
270	-2.803	-0.865	-0.318	-0.2453	-0.0006	0.0025
272	-2.668	-0.166	-4.182	-0.2552	0.0026	-0.0168
273	-2.343	0.534	-8.056	-0.2465	0.0058	-0.0224
289	-3.740	-1.024	-0.350	-0.2482	-0.0003	0.0011
290	-4.677	-0.887	-0.350	-0.2512	0.0004	-0.0065
292	-4.294	-0.186	-4.238	-0.2537	0.0057	-0.0383
293	-3.593	0.514	-8.064	-0.2431	0.0109	-0.0480
299	-4.715	-0.870	-0.349	-0.2512	0.0004	-0.0065
300	-4.753	-0.853	-0.347	-0.2512	0.0004	-0.0065
338	3.362	0.226	-1.266	-0.0079	0.0030	-0.0393
339	3.450	0.024	-1.336	-0.0059	0.0068	-0.0287
340	3.172	-0.425	-1.502	-0.0394	0.0057	-0.0110
341	3.277	-0.258	-1.637	-0.0230	0.0081	-0.0200
346	3.113	-0.528	-1.268	-0.0423	0.0057	-0.0091
349	3.013	-0.788	-0.598	-0.0509	0.0058	-0.0058
350	2.939	-1.048	0.214	-0.0619	0.0060	-0.0055
360	3.445	-0.073	-1.456	-0.0079	0.0094	-0.0260

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
379	4.785	-0.610	-0.635	-0.1461	0.0033	0.0226
380	4.825	-0.560	-0.642	-0.1461	0.0033	0.0226
382	4.187	-0.401	-3.033	-0.1801	-0.0181	0.0474
383	3.473	-0.143	-5.774	-0.1925	-0.0396	0.0441
400	1.651	-0.546	0.271	-0.0808	-0.0031	-0.0067
410	0.867	-0.315	0.086	-0.0922	-0.0047	-0.0031
420	0.110	-0.280	-0.112	-0.1033	-0.0042	0.0012
429	-0.666	-0.254	-0.180	-0.1079	0.0003	-0.0015
430	-1.441	-0.211	-0.155	-0.1124	0.0000	0.0004
440	-2.197	-0.279	-0.188	-0.1168	-0.0010	0.0017
449	-2.975	-0.264	-0.167	-0.1103	0.0014	-0.0016
450	-3.752	-0.197	-0.105	-0.1037	0.0008	-0.0007
460	-6.076	-0.122	0.007	-0.0787	0.0020	0.0009
469	-6.881	-0.218	0.097	-0.0696	0.0018	0.0026
470	-6.920	-0.224	0.102	-0.0696	0.0018	0.0026
489	-6.893	0.049	-0.838	-0.0592	0.0004	0.0063
490	-7.049	0.309	-1.633	-0.0509	-0.0010	0.0170
509	-7.327	0.637	-2.299	-0.0192	0.0054	-0.0060
510	-7.256	0.689	-2.249	0.0049	0.0240	-0.0218
540	-7.255	0.689	-2.248	0.0050	0.0241	-0.0219
550	-6.486	0.528	0.622	0.0051	0.0249	-0.0225
559	-6.184	0.460	0.884	0.0092	0.0649	-0.0292

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
560	-5.719	0.314	0.698	0.0122	0.1072	-0.0395
565	-5.054	-0.000	-0.185	0.0137	0.1331	-0.0459
570	-3.551	-0.775	-2.856	0.0171	0.1879	-0.0377
578	-1.224	-0.980	-1.556	0.0083	0.1386	-0.0289
579	-0.728	-0.847	-1.216	-0.0043	0.1062	-0.0201
580	-0.521	-0.492	-1.114	-0.0120	0.0869	-0.0112
590	-0.070	0.001	-0.451	-0.0018	0.0296	0.0008
600	0.000	0.000	0.000	0.0000	0.0000	0.0000
620	-4.169	-0.722	-3.137	0.0185	0.2093	-0.0322
630	-10.822	-0.129	-6.006	0.0194	0.2119	-0.0315
635	-11.876	0.000	-6.429	0.0375	0.2377	-0.0233
680	-17.451	-8.187	2.834	0.1939	0.0545	0.0386
690	-20.092	-9.142	4.610	0.2082	0.0664	0.0221
691	-21.684	-9.414	5.839	0.2168	0.0724	0.0048
692	-22.651	-8.745	7.930	0.2265	0.0846	-0.0441
700	-22.244	-7.329	11.231	0.2387	0.0915	-0.0907
704	-21.891	-6.990	12.129	0.2396	0.0925	-0.0944
705	-20.790	-6.004	14.761	0.2414	0.0954	-0.1034
707	-15.226	-1.584	26.490	0.2320	0.1083	-0.1131
709	-10.346	3.904	39.043	0.1471	0.1077	-0.0294
710	-11.393	4.389	40.975	0.1160	0.0960	0.0182
719	-13.085	3.191	42.570	0.0707	0.0910	0.0512

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
720	-12.831	1.788	42.443	0.0283	0.0892	0.0587
730	-12.821	1.772	42.438	0.0280	0.0891	0.0587
740	-20.420	-5.688	15.608	0.2417	0.0963	-0.1057
745	-16.033	-2.215	24.853	0.2351	0.1065	-0.1147
750	-8.272	-3.529	-0.728	0.1443	0.0184	0.0415
754	-6.421	-2.737	-1.045	0.1357	0.0128	0.0357
755	-5.634	-2.435	-1.145	0.1329	0.0106	0.0332
760	3.538	-0.305	-1.344	0.0994	-0.0032	0.0110
769	5.388	-0.115	-1.269	0.0938	-0.0040	0.0078
770	6.176	-0.054	-1.232	0.0920	-0.0043	0.0065
780	15.352	0.124	-0.732	0.0709	-0.0047	-0.0001
789	17.205	0.122	-0.637	0.0677	-0.0046	-0.0004
790	17.994	0.115	-0.596	0.0668	-0.0046	-0.0010
800	23.241	-0.009	-0.359	0.0615	-0.0030	-0.0024
810	31.137	-0.057	-0.302	0.0535	0.0021	0.0030
820	39.040	0.779	-0.730	0.0455	0.0074	0.0180
829	40.345	1.060	-0.842	0.0444	0.0079	0.0207
830	40.583	1.114	-0.863	0.0444	0.0079	0.0207
831	37.809	2.455	-0.748	-0.0297	0.0717	0.2340
832	33.258	3.905	-1.665	-0.0796	0.1355	0.3028
885	7.980	0.000	-6.486	0.0175	-0.1306	-0.0091
890	7.371	-0.074	-6.064	0.0147	-0.1293	-0.0165

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
900	3.295	-0.537	-3.195	0.0147	-0.1285	-0.0172
910	2.910	-0.585	-2.914	0.0168	-0.1178	-0.0221
918	1.221	-0.866	-1.615	0.0156	-0.1116	-0.0012
919	0.819	-0.761	-1.264	0.0023	-0.0982	0.0027
920	0.651	-0.416	-1.141	-0.0064	-0.0881	0.0069
930	0.110	0.022	-0.450	0.0041	-0.0400	0.0007
940	0.000	0.000	0.000	0.0000	-0.0000	0.0000
958	0.596	0.447	-5.718	0.0025	-0.0660	-0.0150
959	0.495	0.394	-5.278	0.0087	-0.0634	-0.0229
960	0.739	0.269	-4.901	0.0121	-0.0651	-0.0337
965	1.405	-0.000	-4.412	0.0135	-0.0721	-0.0382
970	0.600	0.447	-5.723	0.0025	-0.0660	-0.0149
980	2.686	0.520	-8.592	0.0019	-0.0660	-0.0143
1008	3.032	0.073	-8.068	-0.1751	-0.0575	0.0267
1009	2.902	0.332	-8.565	-0.0920	-0.0566	-0.0035
1010	2.690	0.520	-8.593	0.0017	-0.0659	-0.0141
1044	-4.498	0.070	-1.524	-0.0983	-0.0036	-0.0000
1045	-4.524	0.330	-2.933	-0.0947	-0.0071	0.0047
1048	-4.597	0.547	-4.033	-0.0825	-0.0100	0.0032
1049	-4.592	0.701	-4.243	-0.0394	-0.0053	-0.0150
1050	-4.564	0.783	-4.213	0.0074	0.0051	-0.0261
1080	-4.563	0.783	-4.212	0.0075	0.0051	-0.0261

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1090	-4.398	0.539	-1.343	0.0078	0.0056	-0.0266
1099	-4.193	0.456	-1.036	0.0118	0.0305	-0.0317
1100	-3.791	0.301	-1.060	0.0141	0.0554	-0.0389
1105	-3.125	-0.000	-1.520	0.0155	0.0688	-0.0426
1110	-1.621	-0.714	-2.845	0.0186	0.0874	-0.0388
1225	-5.445	-0.000	-6.418	0.0142	0.1086	-0.0363
1230	-4.963	-0.077	-5.995	0.0182	0.0973	-0.0377
1240	-1.906	-0.655	-3.126	0.0184	0.0962	-0.0379
1248	-0.572	-0.962	-1.546	0.0111	0.0609	-0.0270
1249	-0.339	-0.836	-1.205	-0.0040	0.0446	-0.0202
1250	-0.218	-0.480	-1.107	-0.0132	0.0351	-0.0126
1260	-0.021	0.008	-0.450	-0.0004	0.0101	-0.0026
1270	0.000	0.000	0.000	0.0000	0.0000	-0.0000
1294	0.013	-0.021	-1.659	-0.1084	-0.0160	0.0099
1295	-0.144	0.239	-3.230	-0.1066	-0.0278	0.0093
1298	-0.220	0.456	-4.475	-0.0937	-0.0376	0.0013
1299	-0.249	0.622	-4.720	-0.0458	-0.0364	-0.0167
1300	-0.359	0.718	-4.697	0.0065	-0.0389	-0.0241
1330	-0.361	0.718	-4.696	0.0066	-0.0389	-0.0242
1340	-1.591	0.502	-4.128	0.0069	-0.0388	-0.0246
1349	-1.581	0.425	-3.735	0.0108	-0.0306	-0.0296
1350	-1.283	0.281	-3.495	0.0131	-0.0237	-0.0363

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1355	-0.617	-0.000	-3.333	0.0143	-0.0221	-0.0395
1360	0.888	-0.632	-2.917	0.0172	-0.0322	-0.0299
1425	2.191	0.000	-6.491	0.0158	-0.0287	-0.0229
1430	2.044	-0.074	-6.068	0.0160	-0.0332	-0.0269
1440	0.991	-0.580	-3.199	0.0161	-0.0333	-0.0272
1448	0.373	-0.891	-1.618	0.0139	-0.0362	-0.0146
1449	0.257	-0.782	-1.268	0.0019	-0.0343	-0.0102
1450	0.230	-0.437	-1.144	-0.0060	-0.0322	-0.0049
1460	0.047	0.015	-0.451	0.0026	-0.0163	-0.0024
1470	0.000	0.000	0.000	0.0000	-0.0000	-0.0000
1499	2.929	1.371	-11.265	-0.1359	-0.0109	0.0438
1500	2.811	1.747	-11.252	-0.0323	-0.0161	0.0439
1510	0.920	0.478	-6.885	0.0112	-0.0184	0.0227
1550	0.000	0.000	-3.000	0.0000	-0.0000	0.0000
1598	0.726	1.171	-10.617	-0.2331	-0.0033	0.0064
1599	0.697	1.613	-11.268	-0.1368	-0.0036	0.0061
1600	0.673	1.984	-11.254	-0.0294	-0.0041	0.0061
1610	0.224	0.451	-6.886	0.0115	-0.0044	0.0031
1650	0.000	-0.000	-3.000	0.0000	-0.0000	0.0000
1698	-0.663	1.314	-10.681	-0.2222	0.0034	-0.0080
1699	-0.628	1.741	-11.293	-0.1293	0.0035	-0.0076
1700	-0.602	2.096	-11.269	-0.0278	0.0039	-0.0075

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
1710	-0.197	0.565	-6.894	0.0131	0.0039	-0.0039
1750	-0.000	0.000	-3.000	0.0000	0.0000	-0.0000
1798	-2.092	1.057	-10.757	-0.2152	0.0082	-0.0213
1799	-2.002	1.466	-11.330	-0.1160	0.0090	-0.0200
1800	-1.933	1.761	-11.284	-0.0112	0.0111	-0.0198
1810	-0.679	-0.343	-6.896	0.0076	0.0132	-0.0135
1850	-0.000	-0.000	-3.000	-0.0000	0.0000	-0.0000
1925	-1.307	-0.000	-6.458	0.0162	0.0324	-0.0332
1930	-1.171	-0.081	-6.034	0.0182	0.0263	-0.0353
1940	-0.347	-0.656	-3.166	0.0183	0.0259	-0.0355
1950	-0.271	-0.714	-2.884	0.0187	0.0237	-0.0369
1958	-0.061	-0.974	-1.585	0.0127	0.0085	-0.0220
1959	-0.016	-0.857	-1.240	-0.0010	0.0017	-0.0160
1960	0.028	-0.507	-1.128	-0.0098	-0.0018	-0.0091
1970	0.017	0.009	-0.455	0.0000	-0.0047	-0.0025
1980	0.000	0.000	0.000	0.0000	-0.0000	-0.0000
1989	-2.259	-0.019	-1.965	-0.1259	-0.0085	0.0061
1990	-2.365	0.240	-3.807	-0.1258	-0.0159	0.0077
1998	-2.445	0.457	-5.282	-0.1114	-0.0221	0.0023
1999	-2.451	0.643	-5.581	-0.0555	-0.0186	-0.0173
2000	-2.479	0.757	-5.569	0.0060	-0.0139	-0.0273
2030	-2.480	0.757	-5.568	0.0062	-0.0139	-0.0274

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2040	-2.917	0.554	-2.699	0.0066	-0.0136	-0.0278
2049	-2.797	0.472	-2.354	0.0111	0.0034	-0.0332
2050	-2.441	0.312	-2.260	0.0136	0.0192	-0.0405
2060	-1.775	-0.000	-2.432	0.0152	0.0257	-0.0438
2098	-3.050	1.038	-10.733	-0.2139	0.0148	-0.0466
2099	-2.855	1.452	-11.313	-0.1216	0.0160	-0.0446
2100	-2.720	1.782	-11.278	-0.0229	0.0193	-0.0441
2110	-0.792	0.257	-6.899	0.0086	0.0166	-0.0228
2150	-0.000	-0.000	-3.000	0.0000	0.0000	-0.0000
2199	38.058	3.389	3.669	0.0548	0.5749	-0.5580
2200	40.405	3.344	3.848	0.0171	0.6337	-0.5465
2205	48.662	3.286	4.429	-0.0079	0.6648	-0.4541
2210	65.395	2.979	4.208	-0.0523	0.2433	-0.1694
2211	64.846	3.525	5.070	-0.0343	0.4149	-0.2512
2214	67.267	-0.730	0.757	0.0141	-0.1270	-0.0392
2215	67.823	-0.702	0.816	0.0318	-0.2165	-0.0302
2220	73.232	-0.000	-0.243	0.0175	-0.2174	-0.0122
2225	76.041	-0.002	-1.005	-0.0196	-0.1014	0.0007
2240	77.261	-0.000	1.120	-0.0551	-0.0690	-0.0176
2300	75.813	0.000	-1.413	-0.0291	-0.0651	-0.0029
2310	74.370	0.000	-1.218	-0.0577	0.0395	-0.0087
2320	75.588	0.781	-2.756	-0.0996	0.0219	-0.0988

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
2500	76.497	1.205	-3.672	-0.0989	0.0217	-0.0980
2504	76.914	1.464	-4.122	-0.0574	0.0159	-0.0447
2508	77.122	1.681	-4.391	-0.0565	0.0158	-0.0434
2510	77.331	1.486	-4.462	-0.0557	0.0157	-0.0427
2520	77.453	1.383	-4.502	-0.0494	0.0142	-0.0371
2540	77.596	1.270	-4.547	-0.0471	0.0134	-0.0353
2545	77.992	0.961	-4.663	-0.0468	0.0132	-0.0351
2548	78.443	0.611	-5.083	-0.0156	-0.0313	-0.0089
2549	78.524	0.533	-5.288	-0.0053	-0.0420	-0.0070
2550	78.313	0.675	-4.891	-0.0174	-0.0297	-0.0102
2551	78.165	0.794	-4.745	-0.0370	-0.0090	-0.0185
2555	78.462	0.419	-5.473	-0.0010	-0.0479	-0.0014
2560	78.034	-0.000	-5.915	-0.0003	-0.0460	-0.0000
3000	79.677	0.783	-0.640	-0.1169	-0.0240	-0.1916
3010	81.438	1.208	-1.714	-0.1158	-0.0235	-0.1898
3020	82.213	1.468	-2.209	-0.0546	-0.0086	-0.0739
3040	82.555	1.685	-2.463	-0.0531	-0.0083	-0.0710
3050	82.764	1.366	-2.426	-0.0521	-0.0083	-0.0695
3060	82.886	1.205	-2.404	-0.0428	-0.0091	-0.0578
3080	82.987	1.030	-2.375	-0.0393	-0.0098	-0.0540
3090	83.264	0.558	-2.289	-0.0389	-0.0099	-0.0537
3099	83.425	0.361	-2.256	-0.0236	-0.0355	-0.0256

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
3100	83.654	0.299	-2.308	0.0035	-0.0563	-0.0129
3108	83.896	0.320	-2.441	0.0054	-0.0572	-0.0109
3109	84.068	0.334	-2.635	0.0105	-0.0563	-0.0095
3110	84.053	0.280	-2.844	0.0020	-0.0481	-0.0021
3120	83.762	-0.000	-3.256	-0.0003	-0.0386	-0.0000
3200	77.490	0.782	-2.548	-0.0801	-0.0328	-0.1405
3210	78.782	1.206	-3.284	-0.0795	-0.0324	-0.1393
3220	79.367	1.465	-3.630	-0.0397	-0.0218	-0.0604
3240	79.648	1.682	-3.815	-0.0387	-0.0216	-0.0584
3250	79.857	1.419	-3.718	-0.0380	-0.0215	-0.0574
3260	79.979	1.283	-3.661	-0.0319	-0.0221	-0.0491
3280	80.123	1.133	-3.591	-0.0296	-0.0225	-0.0463
3290	80.519	0.729	-3.393	-0.0293	-0.0227	-0.0460
3299	80.743	0.562	-3.347	-0.0178	-0.0403	-0.0236
3300	80.997	0.507	-3.446	0.0018	-0.0544	-0.0138
3309	81.376	0.504	-3.875	0.0067	-0.0544	-0.0099
3310	81.322	0.410	-4.096	0.0007	-0.0493	-0.0022
3320	80.898	-0.000	-4.528	-0.0003	-0.0420	-0.0000
4000	-12.301	0.982	42.248	0.0182	0.0831	0.0581
4005	-13.447	1.142	40.825	0.0072	0.0638	0.0570
4010	-15.215	0.704	33.711	-0.0104	-0.0123	0.0519
4020	-11.328	0.000	25.015	-0.0031	-0.0594	0.0456

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
4030	-5.348	-0.000	16.319	0.0007	-0.0559	0.0393
4040	-1.437	0.000	8.414	-0.0002	-0.0360	0.0336
4050	2.801	-0.000	-4.234	-0.0000	-0.0302	0.0244
4100	-11.532	0.828	43.048	0.0168	0.0890	0.0568
4110	-11.230	0.773	43.349	0.0163	0.0910	0.0563
4120	-3.593	0.000	50.330	0.0038	0.0912	0.0452
4130	3.111	-0.000	60.631	0.0022	0.0262	0.0289
4140	3.625	-0.281	65.940	0.0055	-0.0089	0.0205
4150	3.493	-0.362	67.287	0.0055	-0.0089	0.0205
4229	-7.335	-1.608	0.219	0.0173	0.0424	-0.0144
4230	-6.897	-0.157	-0.135	-0.0490	0.0696	-0.0327
4299	4.193	1.262	-0.606	0.0002	0.0311	0.0372
4300	3.500	2.712	-1.139	-0.0585	0.0657	0.0450
4399	15.467	1.574	-0.370	-0.0218	0.0384	0.1024
4400	13.448	3.024	-1.223	-0.0770	0.0814	0.1343
5000	77.670	-0.157	1.734	-0.0551	-0.0690	-0.0176
5260	85.165	-0.000	-2.674	-0.0003	-0.0367	0.0000
5495	3.583	-0.796	-2.017	0.0281	-0.0346	-0.0936
5500	4.851	-1.934	-1.522	0.0295	-0.2238	-0.2340
5501	4.082	-1.683	-1.612	0.0238	-0.1383	-0.1999
5510	4.863	-1.932	-1.524	0.0295	-0.2240	-0.2344
5520	8.024	-1.512	-2.172	0.0301	-0.2251	-0.2374

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
5530	15.561	-0.389	-3.688	0.0270	-0.2081	-0.4548
5540	16.069	-0.323	-3.801	0.0270	-0.2079	-0.4553
5550	16.458	-0.273	-3.888	0.0247	-0.2022	-0.4678
5559	18.218	-0.135	-4.142	-0.0125	-0.1522	-0.5017
5560	20.467	-0.000	-4.333	-0.0483	-0.1459	-0.5749
5570	20.498	0.002	-4.336	-0.0484	-0.1456	-0.5752
5580	30.012	0.762	-5.141	-0.0490	-0.1428	-0.5770
5590	32.059	0.923	-5.318	-0.0504	-0.1320	-0.5815
5595	66.384	3.603	-8.189	-0.0373	-0.0296	-0.5455
5599	78.409	4.638	-8.619	0.0362	-0.0260	-0.3762
5600	79.084	4.381	-8.236	0.0849	-0.0175	-0.3436
5605	79.022	4.012	-8.044	0.0869	-0.0136	-0.3275
5609	78.110	0.181	-5.871	0.0254	-0.0454	-0.1370
5610	77.490	0.288	-6.013	0.0252	-0.0274	-0.0260
5620	77.011	0.000	-6.442	-0.0003	-0.0476	-0.0000
6000	74.290	0.022	-1.120	-0.0577	0.0395	-0.0087
6100	87.078	-0.000	-1.926	-0.0003	-0.0344	0.0000
6110	98.953	0.000	2.000	-0.0003	-0.0278	-0.0000
6120	79.161	-0.000	-5.354	-0.0003	-0.0444	0.0000
6130	71.244	0.000	-9.468	-0.0003	-0.0476	0.0000
7000	6.042	0.000	-12.952	0.0002	-0.0373	0.0181
7010	10.350	-0.000	-22.463	-0.0009	-0.0450	0.0113

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7030	16.736	-0.120	-30.475	-0.0032	-0.0566	0.0032
7031	15.349	-0.153	-30.691	-0.0028	-0.0538	0.0048
7032	14.249	-0.149	-29.849	-0.0023	-0.0509	0.0059
7040	22.299	0.000	-26.879	-0.0032	-0.0606	0.0010
7050	24.969	0.018	-25.071	-0.0032	-0.0623	0.0003
7060	33.396	0.000	-19.068	-0.0032	-0.0668	-0.0002
7070	36.065	-0.005	-17.088	-0.0032	-0.0679	-0.0001
7080	44.492	-0.000	-10.656	-0.0032	-0.0705	0.0001
7090	47.161	0.001	-8.576	-0.0032	-0.0710	0.0000
7100	55.588	0.000	-1.943	-0.0032	-0.0717	-0.0000
7110	55.905	-0.000	-1.692	-0.0032	-0.0717	-0.0000
7199	2.373	0.386	65.807	0.0030	-0.0246	0.0169
7200	1.751	0.402	65.610	0.0018	-0.0358	0.0140
7210	-1.741	0.000	63.820	0.0016	-0.0566	0.0059
7220	-8.081	-0.000	58.718	0.0012	-0.0878	-0.0018
7230	-19.177	0.000	45.643	0.0006	-0.1215	0.0009
7240	-29.955	-0.122	30.527	0.0000	-0.1288	0.0010
7250	-28.848	-0.122	29.743	0.0000	-0.1275	0.0010
7260	-27.504	-0.001	28.777	0.0000	-0.1247	0.0009
7270	-24.161	0.000	26.341	0.0000	-0.1245	0.0009
7280	-22.653	0.000	25.221	0.0000	-0.1196	0.0009
7290	-21.486	0.000	24.321	0.0000	-0.1156	0.0009

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7295	-14.462	0.000	18.100	-0.0000	-0.0895	0.0008
7300	-13.694	0.000	17.309	-0.0000	-0.0864	0.0008
7320	-7.480	-0.000	9.398	0.0000	-0.0567	0.0007
7330	-3.706	0.000	1.486	-0.0000	-0.0304	0.0006
7340	-1.748	0.000	-6.409	0.0000	-0.0191	0.0005
7350	0.372	-0.000	-14.304	-0.0000	-0.0341	0.0004
7370	3.723	0.000	-22.198	0.0000	-0.0318	0.0003
7373	4.022	0.000	-23.097	0.0000	-0.0276	0.0003
7376	4.437	0.000	-29.304	-0.0000	0.0225	0.0002
7380	4.204	-0.000	-30.093	-0.0000	0.0316	0.0002
7400	-3.511	0.000	-37.988	0.0000	0.1561	0.0001
7409	-14.334	0.001	-41.569	0.0000	0.2838	0.0000
7410	-16.361	0.000	-39.008	0.0000	0.3282	0.0000
7415	-23.079	-0.000	-14.000	0.0000	0.3060	-0.0000
7419	-25.306	0.000	-10.564	0.0000	0.2302	-0.0000
7420	-27.454	0.000	-10.615	0.0000	0.1537	-0.0000
7430	-32.053	0.000	-16.280	-0.0000	-0.0063	-0.0000
7438	-26.716	0.000	-21.945	-0.0000	-0.1636	-0.0000
7439	-24.487	0.000	-21.965	-0.0000	-0.2372	-0.0000
7440	-22.614	0.000	-19.741	-0.0000	-0.3017	-0.0000
7445	-22.237	0.000	-18.464	-0.0000	-0.3093	-0.0000
7449	-13.518	0.000	8.998	-0.0000	-0.2759	0.0000

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7450	-10.842	0.000	9.151	-0.0000	-0.2191	0.0000
7460	-3.394	-0.000	5.381	-0.0000	-0.1380	0.0000
7480	2.380	-0.000	-2.514	0.0000	-0.0096	0.0000
7482	2.423	0.000	-3.416	0.0000	-0.0004	0.0000
7485	0.977	0.000	-9.647	-0.0000	0.0328	0.0000
7490	0.684	0.000	-10.440	-0.0000	0.0332	0.0000
7500	0.510	-0.000	-10.915	-0.0000	0.0332	0.0000
7600	-31.071	-0.122	31.310	-0.0000	-0.1297	0.0010
7610	-32.462	-0.000	32.275	-0.0000	-0.1318	0.0009
7615	-33.050	-0.000	32.677	0.0000	-0.1333	0.0009
7620	-34.249	0.080	33.480	0.0004	-0.1381	0.0007
7650	-37.283	0.071	35.472	0.0004	-0.1384	0.0007
7660	-47.637	0.000	41.042	0.0010	-0.2004	0.0006
7670	-69.699	-0.000	48.940	-0.0004	-0.3096	0.0004
7679	-89.782	0.021	52.763	-0.0003	-0.4176	0.0003
7680	-91.803	0.020	49.772	-0.0003	-0.4462	0.0003
7690	-98.761	-0.000	17.006	-0.0002	-0.3484	0.0002
7699	-100.872	-0.003	12.894	-0.0001	-0.2239	0.0002
7700	-102.422	-0.003	12.987	-0.0001	-0.1175	0.0002
7708	-84.235	-0.001	24.014	0.0000	0.4076	0.0001
7709	-80.536	-0.001	23.223	0.0000	0.5039	0.0001
7710	-78.183	-0.000	19.348	0.0000	0.5918	0.0000

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
7720	-77.564	0.000	15.227	0.0000	0.6139	0.0000
7728	-70.603	0.001	-36.498	0.0000	0.6755	0.0000
7729	-67.890	0.001	-41.174	0.0000	0.6354	0.0000
7730	-63.011	0.001	-42.425	0.0000	0.5871	0.0000
7740	-36.972	0.000	-38.018	0.0000	0.4808	0.0000
7750	-3.992	-0.000	-30.119	-0.0000	0.2707	0.0000
7760	10.908	0.000	-22.221	0.0000	0.0830	0.0000
7770	11.644	-0.000	-21.322	0.0000	0.0660	0.0000
7780	12.743	-0.000	-15.113	-0.0000	-0.0263	0.0000
7790	12.474	-0.000	-14.323	-0.0000	-0.0349	0.0000
7800	6.805	0.000	-6.425	0.0000	-0.0829	0.0000
7810	0.000	-0.000	1.473	-0.0000	-0.0609	0.0000
7820	-3.241	0.000	9.399	0.0000	-0.0183	0.0000
7830	-4.000	-0.000	17.325	-0.0000	-0.0041	0.0000
7840	-4.355	0.000	25.251	0.0000	-0.0041	0.0000
7850	-4.395	-0.000	26.153	0.0000	-0.0041	0.0000
7860	-4.674	-0.000	32.384	-0.0000	-0.0041	0.0000
7870	-4.710	-0.000	33.177	-0.0000	-0.0041	0.0000
7880	-5.065	0.000	41.103	0.0000	-0.0041	0.0000
7890	-5.086	-0.000	41.578	0.0000	-0.0041	0.0000
8000	-2.469	1.748	-10.721	0.0226	0.0214	-0.0409
8010	-2.115	1.366	-9.962	0.0233	0.0215	-0.0408

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
8020	-1.984	1.212	-9.684	0.0240	0.0214	-0.0391
8100	-1.787	1.574	-10.727	0.0343	0.0128	-0.0179
8110	-1.575	1.000	-9.968	0.0348	0.0128	-0.0178
8120	-1.496	0.788	-9.689	0.0327	0.0130	-0.0174
8200	-0.553	2.111	-10.713	0.0195	0.0042	-0.0069
8210	-0.484	1.779	-9.954	0.0203	0.0042	-0.0069
8220	-0.458	1.640	-9.676	0.0221	0.0043	-0.0066
8300	0.620	1.998	-10.698	0.0208	-0.0046	0.0056
8310	0.544	1.643	-9.939	0.0217	-0.0046	0.0056
8320	0.516	1.496	-9.662	0.0232	-0.0047	0.0054
8400	2.590	1.807	-10.696	0.0164	-0.0196	0.0406
8410	2.267	1.526	-9.937	0.0173	-0.0196	0.0405
8420	2.145	1.405	-9.661	0.0192	-0.0201	0.0389
9100	-0.039	-2.891	-8.924	0.0039	0.0002	-0.0420
9101	-0.018	-1.922	-7.515	-0.0181	0.0002	-0.0394
9110	0.110	0.320	7.514	-0.1460	-0.0001	-0.0060
9119	0.175	0.517	5.854	-0.1469	0.0000	-0.0058
9120	0.283	0.861	2.992	-0.1422	0.0003	-0.0054
9129	0.350	1.662	1.551	-0.0649	0.0002	-0.0040
9130	0.379	2.015	1.596	0.0217	0.0010	-0.0037
9140	0.436	0.522	2.422	0.0342	0.0015	-0.0028
9150	0.459	0.000	2.685	0.0321	0.0016	-0.0024

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9160	0.492	-0.580	3.028	0.0281	0.0018	-0.0020
9180	0.317	-0.558	3.024	0.0271	-0.0005	-0.0022
9190	0.125	-0.531	2.990	0.0247	-0.0034	-0.0025
9199	-0.111	-0.560	2.921	0.0168	-0.0188	-0.0094
9200	-0.344	-0.581	3.014	-0.0022	-0.0133	-0.0150
9210	-0.346	-0.580	3.017	-0.0022	-0.0132	-0.0150
9220	-0.437	-0.565	3.141	-0.0023	-0.0132	-0.0150
9230	-0.853	-0.356	3.796	-0.0075	-0.0093	-0.0132
9240	-1.109	-0.146	4.295	-0.0075	-0.0092	-0.0131
9250	-1.287	-0.000	4.680	-0.0050	-0.0072	-0.0120
9280	-1.386	0.057	4.944	-0.0028	-0.0060	-0.0113
9290	-1.427	0.076	5.068	-0.0027	-0.0060	-0.0113
9300	-1.680	0.000	6.785	0.0015	0.0003	-0.0065
9310	-1.463	-0.016	8.502	-0.0005	0.0037	-0.0018
9320	-1.437	-0.012	8.627	-0.0005	0.0037	-0.0018
9330	-1.276	-0.000	9.336	-0.0000	0.0042	0.0002
9335	-1.222	0.000	9.521	0.0000	0.0060	0.0003
9340	-0.989	0.007	9.291	0.0003	0.0019	0.0006
9345	-0.776	0.014	9.268	0.0003	0.0019	0.0006
9350	-0.999	0.010	9.171	0.0004	0.0010	0.0008
9360	-1.026	0.023	8.650	0.0005	0.0009	0.0009
9370	-0.514	-0.000	6.507	-0.0018	-0.0080	0.0047

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9378	0.648	-0.515	4.237	-0.0061	-0.0088	0.0087
9379	0.789	-0.547	4.096	-0.0075	-0.0059	0.0088
9380	0.976	-0.489	4.060	-0.0077	-0.0011	0.0100
9390	1.663	-0.090	4.035	-0.0090	0.0033	0.0110
9500	-1.202	-0.000	9.576	0.0000	0.0066	0.0003
9510	-0.999	-0.001	10.118	0.0000	0.0069	0.0003
9519	-0.799	-0.002	10.220	0.0004	0.0182	0.0003
9520	-0.559	0.001	10.133	0.0005	0.0071	0.0006
9530	-0.556	0.001	10.132	0.0005	0.0070	0.0006
9550	-0.365	0.007	10.058	0.0005	0.0043	0.0006
9560	-0.189	0.013	10.016	0.0006	0.0019	0.0006
9580	-0.014	0.019	10.020	0.0005	-0.0004	0.0006
9590	0.177	0.025	10.052	0.0003	-0.0033	0.0007
9599	0.412	0.036	10.119	-0.0000	-0.0184	0.0014
9600	0.640	0.036	10.024	-0.0011	-0.0125	0.0015
9610	0.642	0.036	10.021	-0.0011	-0.0124	0.0015
9620	0.985	0.004	9.522	-0.0011	-0.0123	0.0015
9622	1.027	0.000	9.460	-0.0011	-0.0119	0.0016
9624	1.068	-0.004	9.399	-0.0011	-0.0115	0.0018
9627	1.161	-0.013	9.253	-0.0011	-0.0115	0.0018
9630	1.591	-0.055	8.427	-0.0006	-0.0070	0.0033
9640	1.639	-0.059	8.302	-0.0006	-0.0070	0.0033

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
9650	1.686	-0.063	8.179	-0.0004	-0.0064	0.0035
9660	1.965	0.000	6.687	0.0022	-0.0007	0.0063
9670	1.813	0.155	4.869	-0.0023	0.0030	0.0097
9680	1.792	0.139	4.744	-0.0024	0.0030	0.0097
9690	1.698	-0.000	4.220	-0.0073	0.0033	0.0107
9710	1.637	-0.154	3.918	-0.0098	0.0044	0.0115
9720	1.511	-0.429	3.418	-0.0098	0.0047	0.0116
9730	1.374	-0.613	3.046	-0.0064	0.0083	0.0131
9800	1.316	-0.658	2.920	-0.0063	0.0084	0.0131
9809	1.104	-0.661	2.822	0.0148	0.0191	0.0071
9810	0.862	-0.609	2.913	0.0241	0.0071	-0.0013
9820	0.859	-0.609	2.914	0.0241	0.0070	-0.0013
9840	0.668	-0.596	2.987	0.0269	0.0042	-0.0017
9900	-0.152	0.000	10.359	0.0008	0.0019	0.0006
9910	-0.112	-0.016	10.739	0.0027	0.0018	0.0006
9920	-0.071	-0.115	11.138	0.0081	0.0017	0.0006
9950	-0.034	-1.273	10.254	0.0799	0.0011	0.0004
9951	-0.047	-0.635	11.161	0.0531	0.0013	0.0005
9960	-0.034	-1.276	10.237	0.0799	0.0011	0.0004
9961	-0.027	-1.588	8.817	0.0785	0.0010	0.0004
9962	-0.018	-2.154	8.050	0.0382	0.0008	0.0002
10000	-0.357	-0.007	10.381	0.0008	0.0019	0.0006

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10010	-0.009	-2.449	8.171	-0.0062	0.0003	0.0000
10011	0.003	-1.339	9.619	-0.0157	0.0001	0.0000
10012	0.004	-0.537	10.645	-0.0115	-0.0000	0.0000
10020	-0.000	0.085	15.597	0.0024	-0.0000	0.0000
10029	-0.000	0.075	15.675	0.0024	-0.0000	0.0000
10030	-0.000	0.065	15.754	0.0024	-0.0000	0.0000
10070	0.379	2.011	1.600	0.0218	0.0010	-0.0037
10080	0.404	1.362	1.999	0.0314	0.0012	-0.0033
10100	0.557	-1.361	0.374	-0.0973	0.0058	-0.0290
10110	0.128	-1.628	-8.368	-0.0019	-0.0013	0.0063
10111	0.038	-0.961	-7.158	-0.0100	-0.0008	0.0027
10112	0.004	-0.368	-6.247	-0.0079	-0.0003	0.0001
10120	-0.473	-0.447	-6.106	0.0514	0.0007	0.0129
10121	-0.028	-0.973	-7.984	0.0492	0.0007	0.0114
10122	0.104	-1.383	-8.468	0.0267	-0.0005	0.0075
10130	-1.744	0.771	-1.725	0.0514	0.0007	0.0169
10135	-2.437	0.000	-1.693	0.0514	0.0007	0.0109
10140	-4.202	-0.000	-1.612	0.0514	0.0007	-0.0027
10150	-5.525	0.028	-1.550	0.0514	0.0007	0.0009
10160	-5.967	0.000	-1.530	0.0514	0.0007	0.0007
10170	-7.290	-0.007	-1.469	0.0514	0.0007	-0.0002
10180	-7.731	-0.000	-1.448	0.0514	0.0007	-0.0002

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
10190	-9.055	0.002	-1.387	0.0514	0.0007	0.0001
10200	-9.496	0.000	-1.367	0.0514	0.0007	0.0001
10210	-9.559	-0.000	-1.364	0.0514	0.0007	0.0001
10250	-0.496	-0.422	-6.016	0.0514	0.0007	0.0130
10260	-0.803	-0.098	-4.850	0.0514	0.0007	0.0141
10300	-1.603	0.935	-1.732	0.0514	0.0007	0.0169
11000	-0.001	-0.275	-5.614	-0.0099	0.0001	-0.0359
11010	0.001	0.092	-1.968	0.0015	-0.0000	-0.0293
11020	0.001	0.076	1.674	-0.0012	0.0000	-0.0227
11030	-0.004	-0.346	5.319	0.0096	-0.0001	-0.0160
11040	-0.042	-1.836	8.973	-0.0105	-0.0000	-0.0094
11041	-0.042	-1.507	9.383	-0.0203	0.0001	-0.0087
11042	0.010	-0.615	9.215	-0.0952	0.0002	-0.0080
11100	0.003	-0.025	11.673	-0.0064	-0.0000	0.0000
11110	-0.000	0.091	15.550	0.0024	-0.0000	0.0000
11200	-0.007	0.047	-5.337	-0.0051	-0.0001	-0.0026
11210	-0.007	0.077	-2.034	0.0053	-0.0001	-0.0124
11211	-0.021	-0.536	-0.905	0.0105	-0.0002	-0.0157
11212	-0.037	-1.575	0.224	0.0144	-0.0001	-0.0191
11213	-0.018	-2.421	1.427	-0.0011	0.0008	-0.0226
11214	0.150	-1.978	1.416	-0.0539	0.0039	-0.0246
12000	40.108	1.006	-0.821	0.0444	0.0079	0.0207

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
12008	29.618	5.007	-2.781	-0.0993	0.1839	0.2936
12009	28.228	5.184	-3.315	-0.1065	0.2007	0.2840
12010	26.982	4.918	-3.825	-0.1087	0.2266	0.2783
12015	26.970	4.912	-3.830	-0.1088	0.2268	0.2782
12017	18.085	1.249	-7.007	-0.0954	0.2627	0.1974
12018	12.065	-0.764	-9.216	-0.0675	0.2234	0.1412
12019	11.422	-0.782	-9.873	-0.0550	0.1887	0.1327
12020	11.489	-0.392	-10.648	-0.0480	0.1469	0.1180
12025	11.798	-0.000	-11.128	-0.0409	0.1331	0.1125
12029	12.573	0.785	-11.763	-0.0207	0.0604	0.0899
12030	12.824	0.958	-11.485	-0.0025	0.0018	0.0787
13000	16.416	0.124	-0.678	0.0685	-0.0045	0.0002
13008	11.842	4.126	-2.299	-0.0939	0.1140	0.1289
13009	11.175	4.318	-2.803	-0.0951	0.1260	0.1252
13010	10.470	4.107	-3.293	-0.0909	0.1449	0.1236
13018	-0.088	-0.190	-8.681	-0.0496	0.1893	0.0567
13019	-0.651	-0.276	-9.314	-0.0413	0.1831	0.0529
13020	-0.591	-0.151	-10.127	-0.0367	0.1704	0.0459
13025	-0.282	-0.000	-10.703	-0.0324	0.1647	0.0431
13029	0.582	0.313	-11.653	-0.0203	0.1242	0.0310
13030	1.118	0.411	-11.487	-0.0092	0.0873	0.0247
14000	-19.028	-8.815	3.852	0.2024	0.0618	0.0304

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
14008	-14.216	-2.026	21.490	0.3417	0.2600	-0.0400
14009	-13.422	-3.189	22.214	0.3144	0.2355	-0.0538
14010	-13.410	-3.425	23.190	0.2955	0.2057	-0.0743
14013	-18.693	3.135	18.009	0.3939	0.3222	-0.0108
14014	-18.149	2.872	19.621	0.3822	0.3074	-0.0184
14015	-17.008	1.610	20.551	0.3627	0.2833	-0.0220
14019	-18.553	0.919	8.030	0.3275	0.4025	0.0078
14020	-18.721	1.249	9.959	0.3636	0.3938	0.0048
14025	-16.918	0.908	0.063	0.2192	0.4176	0.0037
14028	-13.478	0.317	-6.998	0.0641	0.2712	-0.0122
14029	-14.749	0.659	-6.853	0.1084	0.3302	-0.0124
14030	-15.636	0.887	-5.642	0.1357	0.3815	-0.0086
15000	4.745	-0.660	-0.628	-0.1461	0.0033	0.0226
15009	0.493	-0.065	-1.030	-0.0040	-0.0759	0.0062
15010	0.240	0.076	-0.692	0.0031	-0.0521	0.0016
15020	0.237	0.075	-0.687	0.0031	-0.0519	0.0016
15098	0.231	-0.432	-1.144	-0.0060	-0.0321	-0.0049
15099	0.194	-0.081	-1.030	-0.0043	-0.0288	-0.0025
15100	0.101	0.064	-0.694	0.0016	-0.0209	-0.0030
15110	0.100	0.064	-0.689	0.0017	-0.0209	-0.0030
16000	-6.841	-0.212	0.093	-0.0696	0.0018	0.0026
16009	-0.373	-0.131	-1.023	-0.0103	0.0686	-0.0045

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
16010	-0.166	0.036	-0.696	-0.0036	0.0408	0.0006
16020	-0.164	0.036	-0.692	-0.0036	0.0407	0.0006
17000	-7.209	-3.059	-0.925	0.1386	0.0152	0.0380
17008	-6.496	0.946	-0.865	-0.0625	0.0902	-0.0328
17009	-6.526	1.195	-1.238	-0.0551	0.0991	-0.0294
17010	-6.882	1.154	-1.660	-0.0411	0.1136	-0.0260
17018	-16.381	0.174	-7.055	-0.0051	0.2142	-0.0173
17019	-17.089	0.128	-7.757	-0.0057	0.2370	-0.0168
17020	-17.128	0.056	-8.830	-0.0065	0.2530	-0.0167
17025	-16.818	-0.000	-9.702	-0.0072	0.2549	-0.0168
17029	-15.780	-0.111	-11.380	-0.0085	0.2426	-0.0187
17030	-14.760	-0.108	-11.409	-0.0090	0.2234	-0.0199
17099	-0.135	-0.118	-1.022	-0.0107	0.0264	-0.0070
17100	-0.052	0.047	-0.695	-0.0024	0.0144	-0.0037
17110	-0.052	0.047	-0.690	-0.0023	0.0143	-0.0037
18000	-4.510	-0.189	-0.097	-0.0973	-0.0001	-0.0007
19000	4.600	-0.188	-1.304	0.0956	-0.0036	0.0092
19009	2.659	4.031	-2.446	-0.0796	0.1022	0.0413
19010	2.179	3.876	-2.912	-0.0765	0.1185	0.0418
19018	-7.020	0.175	-8.301	-0.0453	0.1822	0.0081
19019	-7.577	0.028	-8.935	-0.0388	0.1876	0.0066
19020	-7.529	-0.010	-9.788	-0.0349	0.1869	0.0036

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DISPLACEMENTS REPORT: Nodal Movements
CASE 4 (EXP) L4=L2-L3

NODE	DX mm.	DY mm.	DZ mm.	RX deg.	RY deg.	RZ deg.
19025	-7.220	0.000	-10.426	-0.0318	0.1847	0.0023
19029	-6.308	0.039	-11.559	-0.0231	0.1591	-0.0044
19030	-5.619	0.101	-11.453	-0.0150	0.1328	-0.0081
19099	0.047	-0.149	-1.030	-0.0082	-0.0041	-0.0048
19100	0.033	0.009	-0.700	-0.0015	-0.0053	-0.0034
19110	0.033	0.009	-0.695	-0.0015	-0.0053	-0.0034

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10	0	-166	0	0	0	0	Bi-linear Y2
10	-200	0	0	0	0	0	Bi-linear X2
10	0	0	84	0	0	0	Bi-linear Z2
75	0	-168111	0	0	0	0	Rigid +Y
100	0	3	0	0	0	0	Bi-linear Y2
100	-51	0	0	0	0	0	Bi-linear X2
100	0	0	-40	0	0	0	Bi-linear Z2
101	0	4	0	0	0	0	Bi-linear Y2
101	-58	0	0	0	0	0	Bi-linear X2
101	0	0	163	0	0	0	Bi-linear Z2
102	0	-3	3	0	0	0	Bi-linear X2
102	-18	0	0	0	0	0	Bi-linear X2
102	0	127	127	0	0	0	Bi-linear X2
125	-104	0	0	0	0	0	Bi-linear X2
125	0	0	69	0	0	0	Bi-linear Z2
125	0	-75	0	0	0	0	Bi-linear Y2
150	36	0	0	0	0	0	Bi-linear X2
150	0	0	201	0	0	0	Bi-linear Z2
150	2	0	0	0	0	0	Bi-linear X2
150	0	0	227	0	0	0	Bi-linear Z2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
150	0	-1887	0	0	0	0	Bi-linear Y2
150	3	0	0	0	0	0	Bi-linear X2
150	0	0	347	0	0	0	Bi-linear Z2
150	0	-2878	0	0	0	0	Bi-linear Y2
150	0	-75	0	0	0	0	Bi-linear Y2
160	0	0	533	0	0	0	Bi-linear Z2
160	0	-5440	0	0	0	0	Bi-linear Y2
160	8	0	0	0	0	0	Bi-linear X2
180	0	0	57	0	0	0	Bi-linear Z2
180	0	-332	0	0	0	0	Bi-linear Y2
180	0	-2	0	0	0	0	Bi-linear Y2
180	31	0	0	0	0	0	Bi-linear X2
180	0	0	16	0	0	0	Bi-linear Z2
180	0	0	0	0	0	0	Bi-linear X2
180	0	0	3	0	0	0	Bi-linear Z2
180	0	-19	0	0	0	0	Bi-linear Y2
180	5	0	0	0	0	0	Bi-linear X2
183	-184	0	0	0	0	0	Bi-linear X2
183	0	0	6	0	0	0	Bi-linear Z2
183	0	-2	0	0	0	0	Bi-linear Y2
190	0	0	3	0	0	0	Bi-linear Z2
190	0	-10	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
190	0	0	0	0	0	0	Bi-linear X2
220	0	0	790	0	0	0	Bi-linear Z2
220	0	-5662	0	0	0	0	Bi-linear Y2
220	6	0	0	0	0	0	Bi-linear X2
230	30	0	0	0	0	0	Bi-linear X2
230	0	0	82	0	0	0	Bi-linear Z2
230	3	0	0	0	0	0	Bi-linear X2
230	0	0	172	0	0	0	Bi-linear Z2
230	0	-905	0	0	0	0	Bi-linear Y2
230	4	0	0	0	0	0	Bi-linear X2
230	0	0	259	0	0	0	Bi-linear Z2
230	0	-1363	0	0	0	0	Bi-linear Y2
230	0	-10	0	0	0	0	Bi-linear Y2
232	225	0	0	0	0	0	Bi-linear X2
232	0	0	57	0	0	0	Bi-linear Z2
232	0	-10	0	0	0	0	Bi-linear Y2
240	0	0	135	0	0	0	Bi-linear Z2
240	0	-514	0	0	0	0	Bi-linear Y2
240	7	0	0	0	0	0	Bi-linear X2
250	30	0	0	0	0	0	Bi-linear X2
250	0	0	1	0	0	0	Bi-linear Z2
250	3	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
250	0	0	3	0	0	0	Bi-linear Z2
250	0	24	0	0	0	0	Bi-linear Y2
250	4	0	0	0	0	0	Bi-linear X2
250	0	0	4	0	0	0	Bi-linear Z2
250	0	33	0	0	0	0	Bi-linear Y2
250	0	0	0	0	0	0	Bi-linear Y2
253	35	0	0	0	0	0	Bi-linear X2
253	0	0	0	0	0	0	Bi-linear Z2
253	0	0	0	0	0	0	Bi-linear Y2
260	0	0	5	0	0	0	Bi-linear Z2
260	0	166	0	0	0	0	Bi-linear Y2
260	7	0	0	0	0	0	Bi-linear X2
270	30	0	0	0	0	0	Bi-linear X2
270	0	0	8	0	0	0	Bi-linear Z2
270	7	0	0	0	0	0	Bi-linear X2
270	0	0	42	0	0	0	Bi-linear Z2
270	0	224	0	0	0	0	Bi-linear Y2
270	4	0	0	0	0	0	Bi-linear X2
270	0	0	25	0	0	0	Bi-linear Z2
270	0	130	0	0	0	0	Bi-linear Y2
270	0	1	0	0	0	0	Bi-linear Y2
273	17	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
273	0	0	15	0	0	0	Bi-linear Z2
273	0	1	0	0	0	0	Bi-linear Y2
290	30	0	0	0	0	0	Bi-linear X2
290	0	0	12	0	0	0	Bi-linear Z2
290	0	0	0	0	0	0	Bi-linear X2
290	0	0	2	0	0	0	Bi-linear Z2
290	0	-17	0	0	0	0	Bi-linear Y2
290	7	0	0	0	0	0	Bi-linear X2
290	0	0	59	0	0	0	Bi-linear Z2
290	0	-420	0	0	0	0	Bi-linear Y2
290	0	-2	0	0	0	0	Bi-linear Y2
293	-6	0	0	0	0	0	Bi-linear X2
293	0	0	15	0	0	0	Bi-linear Z2
293	0	-2	0	0	0	0	Bi-linear Y2
300	0	0	2	0	0	0	Bi-linear Z2
300	0	-18	0	0	0	0	Bi-linear Y2
300	0	0	0	0	0	0	Bi-linear X2
346	0	-18	0	0	0	0	Bi-linear Y2
346	-153	0	0	0	0	0	Bi-linear X2
346	0	0	122	0	0	0	Bi-linear Z2
350	0	-19	0	0	0	0	Bi-linear Y2
350	137	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
350	0	0	286	0	0	0	Bi-linear Z2
350	17	0	0	0	0	0	Bi-linear X2
350	0	0	1003	0	0	0	Bi-linear Z2
350	0	-1891	0	0	0	0	Bi-linear Y2
380	1	0	0	0	0	0	Bi-linear X2
380	0	0	9	0	0	0	Bi-linear Z2
380	0	-210	0	0	0	0	Bi-linear Y2
383	0	-27	0	0	0	0	Bi-linear Y2
383	279	0	0	0	0	0	Bi-linear X2
383	0	0	27	0	0	0	Bi-linear Z2
410	7	0	0	0	0	0	Bi-linear X2
410	0	0	147	0	0	0	Bi-linear Z2
410	0	-3058	0	0	0	0	Bi-linear Y2
420	0	-30	0	0	0	0	Bi-linear Y2
420	131	0	0	0	0	0	Bi-linear X2
420	0	0	41	0	0	0	Bi-linear Z2
420	22	0	0	0	0	0	Bi-linear X2
420	0	0	196	0	0	0	Bi-linear Z2
420	0	-6674	0	0	0	0	Bi-linear Y2
430	15	0	0	0	0	0	Bi-linear X2
430	0	0	8	0	0	0	Bi-linear Z2
430	0	-2020	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
430	7	0	0	0	0	0	Bi-linear X2
430	0	0	4	0	0	0	Bi-linear Z2
430	0	-985	0	0	0	0	Bi-linear Y2
440	0	-17	0	0	0	0	Bi-linear Y2
440	134	0	0	0	0	0	Bi-linear X2
440	0	0	7	0	0	0	Bi-linear Z2
440	22	0	0	0	0	0	Bi-linear X2
440	0	0	34	0	0	0	Bi-linear Z2
440	0	-3679	0	0	0	0	Bi-linear Y2
450	15	0	0	0	0	0	Bi-linear X2
450	0	0	27	0	0	0	Bi-linear Z2
450	0	-1952	0	0	0	0	Bi-linear Y2
450	7	0	0	0	0	0	Bi-linear X2
450	0	0	13	0	0	0	Bi-linear Z2
450	0	-951	0	0	0	0	Bi-linear Y2
460	23	0	0	0	0	0	Bi-linear X2
460	0	0	-11	0	0	0	Bi-linear Z2
460	0	-4516	0	0	0	0	Bi-linear Y2
470	1	0	0	0	0	0	Bi-linear X2
470	0	0	13	0	0	0	Bi-linear Z2
470	0	-284	0	0	0	0	Bi-linear Y2
490	0	-36	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
490	11	0	0	0	0	0	Bi-linear X2
490	0	0	-150	0	0	0	Bi-linear Z2
565	0	-21215	0	0	0	0	Rigid +Y
600	477	2034	486	1660	-1658	767	Displ. Reaction
635	0	-15255	0	0	0	0	Rigid +Y
680	0	0	-220	0	0	0	Bi-linear Z2
680	0	-12817	0	0	0	0	Bi-linear Y2
680	-13	0	0	0	0	0	Bi-linear X2
680	0	0	-38	0	0	0	Bi-linear Z2
680	0	-2200	0	0	0	0	Bi-linear Y2
680	-74	0	0	0	0	0	Bi-linear X2
690	0	0	-95	0	0	0	Bi-linear Z2
690	0	-3887	0	0	0	0	Bi-linear Y2
690	-22	0	0	0	0	0	Bi-linear X2
691	0	0	-127	0	0	0	Bi-linear Z2
691	0	-4185	0	0	0	0	Bi-linear Y2
691	-23	0	0	0	0	0	Bi-linear X2
692	0	0	-112	0	0	0	Bi-linear Z2
692	-1878	-1878	0	0	0	0	Bi-linear X2
692	210	-210	0	0	0	0	Bi-linear X2
700	15	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
700	0	0	-82	0	0	0	Bi-linear Z2
700	0	-448	0	0	0	0	Bi-linear Y2
705	168	0	0	0	0	0	Bi-linear X2
705	0	0	-14	0	0	0	Bi-linear Z2
705	0	-233	0	0	0	0	Bi-linear Y2
750	0	0	-89	0	0	0	Bi-linear Z2
750	0	-10699	0	0	0	0	Bi-linear Y2
750	-82	0	0	0	0	0	Bi-linear X2
755	0	0	-13	0	0	0	Bi-linear Z2
755	0	-1507	0	0	0	0	Bi-linear Y2
755	-74	0	0	0	0	0	Bi-linear X2
755	0	0	-74	0	0	0	Bi-linear Z2
755	0	-8780	0	0	0	0	Bi-linear Y2
755	-13	0	0	0	0	0	Bi-linear X2
760	0	0	-91	0	0	0	Bi-linear Z2
760	0	-8029	0	0	0	0	Bi-linear Y2
760	-82	0	0	0	0	0	Bi-linear X2
770	0	0	-15	0	0	0	Bi-linear Z2
770	0	-1201	0	0	0	0	Bi-linear Y2
770	-73	0	0	0	0	0	Bi-linear X2
770	0	0	-85	0	0	0	Bi-linear Z2
770	0	-6996	0	0	0	0	Bi-linear Y2

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
770	-13	0	0	0	0	0	Bi-linear X2
780	0	0	-90	0	0	0	Bi-linear Z2
780	0	-7598	0	0	0	0	Bi-linear Y2
780	-82	0	0	0	0	0	Bi-linear X2
790	0	0	-13	0	0	0	Bi-linear Z2
790	0	-1170	0	0	0	0	Bi-linear Y2
790	-42	0	0	0	0	0	Bi-linear X2
790	0	0	-42	0	0	0	Bi-linear Z2
790	0	-3890	0	0	0	0	Bi-linear Y2
790	-13	0	0	0	0	0	Bi-linear X2
800	0	0	-88	0	0	0	Bi-linear Z2
800	0	-10020	0	0	0	0	Bi-linear Y2
800	-104	0	0	0	0	0	Bi-linear X2
810	0	0	-147	0	0	0	Bi-linear Z2
810	0	-12831	0	0	0	0	Bi-linear Y2
810	-125	0	0	0	0	0	Bi-linear X2
820	0	0	-169	0	0	0	Bi-linear Z2
820	0	-7668	0	0	0	0	Bi-linear Y2
820	-71	0	0	0	0	0	Bi-linear X2
830	0	0	-10	0	0	0	Bi-linear Z2
830	0	-408	0	0	0	0	Bi-linear Y2
830	-4	0	0	0	0	0	Bi-linear X2

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
832	-141	0	0	0	0	0	Bi-linear X2
832	0	0	7	0	0	0	Bi-linear Z2
832	0	-75	0	0	0	0	Bi-linear Y2
885	0	-12133	0	0	0	0	Rigid +Y
940	25	-1449	106	-756	-76	-236	Displ. Reaction
965	0	-16351	0	0	0	0	Rigid +Y
1045	0	-17	0	0	0	0	Bi-linear Y2
1045	-5	0	0	0	0	0	Bi-linear X2
1045	0	0	66	0	0	0	Bi-linear Z2
1105	0	-15907	0	0	0	0	Rigid +Y
1225	0	-11980	0	0	0	0	Rigid +Y
1270	-99	-1665	219	-919	257	-255	Displ. Reaction
1295	0	-30	0	0	0	0	Bi-linear Y2
1295	267	0	0	0	0	0	Bi-linear X2
1295	0	0	32	0	0	0	Bi-linear Z2
1355	0	-16575	0	0	0	0	Rigid +Y
1425	0	-12099	0	0	0	0	Rigid +Y
1470	-40	-1388	14	-696	-29	-252	Displ. Reaction
1550	-9	-3726	-201	-5333	70	54	Displ. Reaction
1650	9	-3638	-339	-5086	-73	-47	Displ.

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
							Reaction
1750	1	-3755	-63	-5412	-9	0	Displ. Reaction
1850	1	-3784	-128	-5314	-4	5	Displ. Reaction
1925	0	-11871	0	0	0	0	Rigid +Y
1980	-84	-1781	95	-977	171	-281	Displ. Reaction
1990	0	0	63	0	0	0	Bi-linear Z2
1990	0	-17	0	0	0	0	Bi-linear Y2
1990	4	0	0	0	0	0	Bi-linear X2
2060	0	-15761	0	0	0	0	Rigid +Y
2150	-1	-3730	-82	-5343	6	10	Displ. Reaction
2205	0	-2648	0	0	0	0	Rigid +Y
2220	0	-3421	0	0	0	0	Rigid +Y
2240	0	0	0	0	0	0	Rigid Z w/gap
2240	0	-3188	0	0	0	0	Rigid +Y
2300	0	-2046	0	0	0	0	Rigid +Y
2310	0	0	0	0	0	0	Rigid Z w/gap
2310	0	-3096	0	0	0	0	Rigid +Y
2560	20	-3646	52	1132	57	-1577	Displ. Reaction

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
3120	36	748	-1	1112	54	2419	Displ. Reaction
3320	-7	-5266	20	1121	29	-1859	Displ. Reaction
4005	0	-133919	0	0	0	0	Rigid +Y
4010	0	-36415	0	0	0	0	Rigid +Y
4020	0	-59905	0	0	0	0	Rigid +Y
4030	0	0	0	0	0	0	Rigid X w/gap
4030	0	-44445	0	0	0	0	Rigid +Y
4040	0	-68633	0	0	0	0	Rigid +Y
4050	0	-74793	0	0	0	0	Rigid +Y
4050	157	0	0	0	0	0	Rigid X w/gap
4050	0	0	0	0	0	0	Rigid Z w/gap
4120	0	-60130	0	0	0	0	Rigid +Y
4120	1985	0	0	0	0	0	Rigid X w/gap
4130	0	-85476	0	0	0	0	Rigid +Y
4230	-352	0	0	0	0	0	Bi-linear X2
4230	0	0	65	0	0	0	Bi-linear Z2
4230	0	-88	0	0	0	0	Bi-linear Y2
4300	0	-67	0	0	0	0	Bi-linear Y2
4300	-219	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
4300	0	0	48	0	0	0	Bi-linear Z2
4400	0	0	21	0	0	0	Bi-linear Z2
4400	0	-65	0	0	0	0	Bi-linear Y2
4400	-156	0	0	0	0	0	Bi-linear X2
5560	0	-12373	0	0	0	0	Rigid +Y
5605	0	-4232	0	0	0	0	Rigid +Y
5620	113	-8172	199	-246	-315	1176	Displ. Reaction
6100	0	-17629	0	0	0	0	Rigid +Y
6110	0	0	0	0	0	0	Rigid Z w/gap
6110	0	-5797	0	0	0	0	Rigid +Y
6120	0	-1774	0	0	0	0	Rigid +Y
6130	0	0	0	0	0	0	Rigid Z w/gap
6130	0	-2665	0	0	0	0	Rigid +Y
7000	0	-35005	0	0	0	0	Rigid +Y
7010	0	-88489	0	0	0	0	Rigid +Y
7040	0	-99249	0	0	0	0	Rigid +Y
7060	0	-51084	0	0	0	0	Rigid +Y
7080	0	-81952	0	0	0	0	Rigid +Y
7100	0	-28750	0	0	0	0	Rigid +Y
7100	0	0	0	0	0	0	Rigid Z w/gap

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7210	0	-68147	0	0	0	0	Rigid +Y
7220	0	-31098	0	0	0	0	Rigid +Y
7230	0	-83297	0	0	0	0	Rigid +Y
7280	0	-78798	0	0	0	0	Rigid +Y
7300	0	-26572	0	0	0	0	Rigid +Y
7320	0	-29926	0	0	0	0	Rigid +Y
7330	0	0	0	0	0	0	Rigid X w/gap
7330	0	-29017	0	0	0	0	Rigid +Y
7330	0	0	0	0	0	0	Rigid Z w/gap
7340	0	-29494	0	0	0	0	Rigid +Y
7350	0	-28390	0	0	0	0	Rigid +Y
7350	27	0	0	0	0	0	Rigid X w/gap
7370	0	-32566	0	0	0	0	Rigid +Y
7380	0	-16074	0	0	0	0	Rigid +Y
7400	0	-50847	0	0	0	0	Rigid +Y
7400	16	0	0	0	0	0	Rigid X w/gap
7415	0	-49440	0	0	0	0	Rigid +Y
7445	0	-49263	0	0	0	0	Rigid +Y
7460	0	-50288	0	0	0	0	Rigid +Y
7460	0	0	0	0	0	0	Rigid X

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
							w/gap
7480	0	-20354	0	0	0	0	Rigid +Y
7480	0	0	0	0	0	0	Rigid Z w/gap
7490	0	-15420	0	0	0	0	Rigid +Y
7490	0	0	0	0	0	0	Rigid X w/gap
7615	0	-109184	0	0	0	0	Rigid +Y
7660	0	-11364	0	0	0	0	Rigid +Y
7670	0	-34236	0	0	0	0	Rigid +Y
7690	0	-31477	0	0	0	0	Rigid +Y
7720	0	-30958	0	0	0	0	Rigid +Y
7740	0	-35248	0	0	0	0	Rigid +Y
7750	0	0	0	0	0	0	Rigid X w/gap
7750	0	-9127	0	0	0	0	Rigid +Y
7760	0	-21412	0	0	0	0	Rigid +Y
7790	0	-18244	0	0	0	0	Rigid +Y
7800	0	-19058	0	0	0	0	Rigid +Y
7810	0	0	0	0	0	0	Rigid X w/gap
7810	0	-18861	0	0	0	0	Rigid +Y
7810	0	0	0	0	0	0	Rigid Z w/gap

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7820	0	-18862	0	0	0	0	Rigid +Y
7830	-2	0	0	0	0	0	Rigid X w/gap
7830	0	-19052	0	0	0	0	Rigid +Y
7840	0	-18265	0	0	0	0	Rigid +Y
7870	0	0	0	0	0	0	Rigid X w/gap
7870	0	-21330	0	0	0	0	Rigid +Y
7880	0	-8642	0	0	0	0	Rigid +Y
8020	0	-8282	0	0	0	0	Rigid +Y
8020	0	0	0	0	0	0	Rigid X w/gap
8120	0	-11318	0	0	0	0	Rigid +Y
8120	0	0	0	0	0	0	Rigid X w/gap
8220	0	0	0	0	0	0	Rigid X w/gap
8220	0	-8153	0	0	0	0	Rigid +Y
8320	0	-8777	0	0	0	0	Rigid +Y
8320	0	0	0	0	0	0	Rigid X w/gap
8420	0	0	0	0	0	0	Rigid X w/gap
8420	0	-8318	0	0	0	0	Rigid +Y
9100	0	298	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
9100	0	0	31	0	0	0	Bi-linear Z2
9100	8	0	0	0	0	0	Bi-linear X2
9101	0	-1616	0	0	0	0	Bi-linear Y2
9101	0	0	62	0	0	0	Bi-linear Z2
9101	87	0	0	0	0	0	Bi-linear X2
9110	0	0	-321	0	0	0	Bi-linear Z2
9110	0	-78	0	0	0	0	Bi-linear Y2
9110	-205	0	0	0	0	0	Bi-linear X2
9120	0	0	-674	0	0	0	Bi-linear Z2
9120	0	-52	0	0	0	0	Bi-linear Y2
9120	-783	0	0	0	0	0	Bi-linear X2
9150	0	-105161	0	0	0	0	Rigid +Y
9250	0	-53764	0	0	0	0	Rigid +Y
9300	0	-28015	0	0	0	0	Rigid +Y
9335	0	-98723	0	0	0	0	Rigid +Y
9370	0	0	0	0	0	0	Rigid X w/gap
9370	0	-43774	0	0	0	0	Rigid +Y
9622	0	-72260	0	0	0	0	Rigid +Y
9660	0	-29588	0	0	0	0	Rigid +Y
9690	0	-62833	0	0	0	0	Rigid +Y
9900	0	-59791	0	0	0	0	Rigid +Y

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
9960	0	0	-507	0	0	0	Bi-linear Z2
9960	0	-4	0	0	0	0	Bi-linear Y2
9960	203	0	0	0	0	0	Bi-linear X2
9961	0	0	-835	0	0	0	Bi-linear Z2
9961	0	-7	0	0	0	0	Bi-linear Y2
9961	135	0	0	0	0	0	Bi-linear X2
9962	0	-391	-391	0	0	0	Bi-linear X2
9962	0	16	-16	0	0	0	Bi-linear X2
9962	-48	0	0	0	0	0	Bi-linear X2
10010	0	-94	0	0	0	0	Bi-linear Y2
10010	0	0	-108	0	0	0	Bi-linear Z2
10010	-318	0	0	0	0	0	Bi-linear X2
10011	0	-1086	0	0	0	0	Bi-linear Y2
10011	0	0	-155	0	0	0	Bi-linear Z2
10011	-107	0	0	0	0	0	Bi-linear X2
10012	0	-4257	0	0	0	0	Bi-linear Y2
10012	0	0	-128	0	0	0	Bi-linear Z2
10012	3	0	0	0	0	0	Bi-linear X2
10020	0	-1085	0	0	0	0	Bi-linear Y2
10020	0	0	-13	0	0	0	Bi-linear Z2
10020	1	0	0	0	0	0	Bi-linear X2
10030	0	-723	0	0	0	0	Bi-linear Y2

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10030	0	0	-10	0	0	0	Bi-linear Z2
10030	0	0	0	0	0	0	Bi-linear X2
10100	-40	0	0	0	0	0	Bi-linear X2
10100	0	0	30	0	0	0	Bi-linear Z2
10100	0	-252	0	0	0	0	Bi-linear Y2
10110	-1108	0	0	0	0	0	Bi-linear X2
10110	0	-4314	0	0	0	0	Bi-linear Y2
10110	0	0	-42	0	0	0	Bi-linear Z2
10111	-484	0	0	0	0	0	Bi-linear X2
10111	0	-2972	0	0	0	0	Bi-linear Y2
10111	0	0	-63	0	0	0	Bi-linear Z2
10112	-40	0	0	0	0	0	Bi-linear X2
10112	0	-4348	0	0	0	0	Bi-linear Y2
10112	0	0	-55	0	0	0	Bi-linear Z2
10120	1412	0	0	0	0	0	Bi-linear X2
10120	0	0	-1135	0	0	0	Bi-linear Z2
10120	0	-113	0	0	0	0	Bi-linear Y2
10121	176	0	0	0	0	0	Bi-linear X2
10121	0	0	-848	0	0	0	Bi-linear Z2
10121	0	-161	0	0	0	0	Bi-linear Y2
10122	-254	0	0	0	0	0	Bi-linear X2
10122	0	-928	-928	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10122	0	-37	37	0	0	0	Bi-linear X2
10135	0	-87403	0	0	0	0	Rigid +Y
10140	0	-35518	0	0	0	0	Rigid +Y
10160	0	-53251	0	0	0	0	Rigid +Y
10180	0	-56611	0	0	0	0	Rigid +Y
10200	0	0	0	0	0	0	Rigid Z w/gap
10200	0	-22186	0	0	0	0	Rigid +Y
11000	0	0	106	0	0	0	Bi-linear Z2
11000	55	0	0	0	0	0	Bi-linear X2
11000	0	-23199	0	0	0	0	Bi-linear Y2
11010	0	0	145	0	0	0	Bi-linear Z2
11010	-2	0	0	0	0	0	Bi-linear X2
11010	0	-52667	0	0	0	0	Bi-linear Y2
11020	0	0	149	0	0	0	Bi-linear Z2
11020	1	0	0	0	0	0	Bi-linear X2
11020	0	-49833	0	0	0	0	Bi-linear Y2
11030	0	0	154	0	0	0	Bi-linear Z2
11030	-235	0	0	0	0	0	Bi-linear X2
11030	0	-54510	0	0	0	0	Bi-linear Y2
11040	0	0	89	0	0	0	Bi-linear Z2
11040	896	0	0	0	0	0	Bi-linear X2

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11040	0	-18194	0	0	0	0	Bi-linear Y2
11041	0	0	15	0	0	0	Bi-linear Z2
11041	231	0	0	0	0	0	Bi-linear X2
11041	0	-1957	0	0	0	0	Bi-linear Y2
11042	0	-28	-28	0	0	0	Bi-linear X2
11042	123	0	0	0	0	0	Bi-linear X2
11042	0	-594	594	0	0	0	Bi-linear X2
11100	0	-25958	0	0	0	0	Bi-linear Y2
11100	0	0	-305	0	0	0	Bi-linear Z2
11100	86	0	0	0	0	0	Bi-linear X2
11110	0	-21837	0	0	0	0	Bi-linear Y2
11110	0	0	-244	0	0	0	Bi-linear Z2
11110	13	0	0	0	0	0	Bi-linear X2
11200	239	0	0	0	0	0	Bi-linear X2
11200	0	-24585	0	0	0	0	Bi-linear Y2
11200	0	0	-128	0	0	0	Bi-linear Z2
11210	31	0	0	0	0	0	Bi-linear X2
11210	0	-25020	0	0	0	0	Bi-linear Y2
11210	0	0	-139	0	0	0	Bi-linear Z2
11211	-62	0	0	0	0	0	Bi-linear X2
11211	0	-4009	0	0	0	0	Bi-linear Y2
11211	0	0	-72	0	0	0	Bi-linear Z2

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CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11212	-74	0	0	0	0	0	Bi-linear X2
11212	0	-4679	0	0	0	0	Bi-linear Y2
11212	0	0	-75	0	0	0	Bi-linear Z2
11213	73	0	0	0	0	0	Bi-linear X2
11213	0	-8120	0	0	0	0	Bi-linear Y2
11213	0	0	-46	0	0	0	Bi-linear Z2
11214	24	0	0	0	0	0	Bi-linear X2
11214	0	-1348	1348	0	0	0	Bi-linear X2
11214	0	-87	-87	0	0	0	Bi-linear X2
12000	0	0	-31	0	0	0	Bi-linear Z2
12000	0	-1323	0	0	0	0	Bi-linear Y2
12000	0	-75	0	0	0	0	Bi-linear Y2
12000	-152	0	0	0	0	0	Bi-linear X2
12000	0	0	-47	0	0	0	Bi-linear Z2
12000	-12	0	0	0	0	0	Bi-linear X2
12025	0	-4630	0	0	0	0	Rigid +Y
13000	0	-65	0	0	0	0	Bi-linear Y2
13000	-152	0	0	0	0	0	Bi-linear X2
13000	0	0	-20	0	0	0	Bi-linear Z2
13000	-21	0	0	0	0	0	Bi-linear X2
13000	0	0	-22	0	0	0	Bi-linear Z2
13000	0	-1956	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
13025	0	-4604	0	0	0	0	Rigid +Y
14000	-21	0	0	0	0	0	Bi-linear X2
14000	0	0	-81	0	0	0	Bi-linear Z2
14000	0	-3802	0	0	0	0	Bi-linear Y2
15000	0	0	70	0	0	0	Bi-linear Z2
15000	17	0	0	0	0	0	Bi-linear X2
15000	0	0	270	0	0	0	Bi-linear Z2
15000	0	-4798	0	0	0	0	Bi-linear Y2
15000	0	-27	0	0	0	0	Bi-linear Y2
15000	128	0	0	0	0	0	Bi-linear X2
16000	0	0	67	0	0	0	Bi-linear Z2
16000	8	0	0	0	0	0	Bi-linear X2
16000	0	0	117	0	0	0	Bi-linear Z2
16000	0	-2905	0	0	0	0	Bi-linear Y2
16000	0	-36	0	0	0	0	Bi-linear Y2
16000	141	0	0	0	0	0	Bi-linear X2
17000	0	-88	0	0	0	0	Bi-linear Y2
17000	-154	0	0	0	0	0	Bi-linear X2
17000	0	0	-19	0	0	0	Bi-linear Z2
17000	-21	0	0	0	0	0	Bi-linear X2
17000	0	0	-22	0	0	0	Bi-linear Z2
17000	0	-2656	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 1 (HYD) WW+HP

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
17025	0	-4672	0	0	0	0	Rigid +Y
18000	137	0	0	0	0	0	Bi-linear X2
18000	0	0	5	0	0	0	Bi-linear Z2
18000	0	-16	0	0	0	0	Bi-linear Y2
18000	23	0	0	0	0	0	Bi-linear X2
18000	0	0	24	0	0	0	Bi-linear Z2
18000	0	-3660	0	0	0	0	Bi-linear Y2
19000	0	-2041	0	0	0	0	Bi-linear Y2
19000	0	-67	0	0	0	0	Bi-linear Y2
19000	-153	0	0	0	0	0	Bi-linear X2
19000	0	0	-21	0	0	0	Bi-linear Z2
19000	-21	0	0	0	0	0	Bi-linear X2
19000	0	0	-24	0	0	0	Bi-linear Z2
19025	0	-4582	0	0	0	0	Rigid +Y

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10	0	-204	0	0	0	0	Bi-linear Y2
10	1746	0	0	0	0	0	Bi-linear X2
10	0	0	-3580	0	0	0	Bi-linear Z2
75	0	-41095	0	0	0	0	Rigid +Y
100	0	-27	0	0	0	0	Bi-linear Y2
100	3092	0	0	0	0	0	Bi-linear X2
100	0	0	-3652	0	0	0	Bi-linear Z2
101	0	-99	0	0	0	0	Bi-linear Y2
101	1756	0	0	0	0	0	Bi-linear X2
101	0	0	-14755	0	0	0	Bi-linear Z2
102	0	257	-257	0	0	0	Bi-linear X2
102	305	0	0	0	0	0	Bi-linear X2
102	0	-7393	-7393	0	0	0	Bi-linear X2
125	3053	0	0	0	0	0	Bi-linear X2
125	0	0	-3723	0	0	0	Bi-linear Z2
125	0	-89	0	0	0	0	Bi-linear Y2
150	3122	0	0	0	0	0	Bi-linear X2
150	0	0	55	0	0	0	Bi-linear Z2
150	157	0	0	0	0	0	Bi-linear X2
150	0	0	62	0	0	0	Bi-linear Z2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
150	0	-2843	0	0	0	0	Bi-linear Y2
150	240	0	0	0	0	0	Bi-linear X2
150	0	0	94	0	0	0	Bi-linear Z2
150	0	-4336	0	0	0	0	Bi-linear Y2
150	0	-112	0	0	0	0	Bi-linear Y2
160	0	0	-396	0	0	0	Bi-linear Z2
160	0	-9716	0	0	0	0	Bi-linear Y2
160	850	0	0	0	0	0	Bi-linear X2
180	0	0	-3761	0	0	0	Bi-linear Z2
180	0	-3958	0	0	0	0	Bi-linear Y2
180	0	-26	0	0	0	0	Bi-linear Y2
180	4800	0	0	0	0	0	Bi-linear X2
180	0	0	-1072	0	0	0	Bi-linear Z2
180	43	0	0	0	0	0	Bi-linear X2
180	0	0	-214	0	0	0	Bi-linear Z2
180	0	-225	0	0	0	0	Bi-linear Y2
180	752	0	0	0	0	0	Bi-linear X2
183	3599	0	0	0	0	0	Bi-linear X2
183	0	0	-8039	0	0	0	Bi-linear Z2
183	0	7	0	0	0	0	Bi-linear Y2
190	0	0	-227	0	0	0	Bi-linear Z2
190	0	-215	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
190	44	0	0	0	0	0	Bi-linear X2
220	0	0	-440	0	0	0	Bi-linear Z2
220	0	-8675	0	0	0	0	Bi-linear Y2
220	432	0	0	0	0	0	Bi-linear X2
230	961	0	0	0	0	0	Bi-linear X2
230	0	0	-489	0	0	0	Bi-linear Z2
230	90	0	0	0	0	0	Bi-linear X2
230	0	0	-1022	0	0	0	Bi-linear Z2
230	0	-2362	0	0	0	0	Bi-linear Y2
230	135	0	0	0	0	0	Bi-linear X2
230	0	0	-1539	0	0	0	Bi-linear Z2
230	0	-3558	0	0	0	0	Bi-linear Y2
230	0	-26	0	0	0	0	Bi-linear Y2
232	989	0	0	0	0	0	Bi-linear X2
232	0	0	-7911	0	0	0	Bi-linear Z2
232	0	7	0	0	0	0	Bi-linear Y2
240	0	0	-2345	0	0	0	Bi-linear Z2
240	0	-3631	0	0	0	0	Bi-linear Y2
240	36	0	0	0	0	0	Bi-linear X2
250	-948	0	0	0	0	0	Bi-linear X2
250	0	0	-402	0	0	0	Bi-linear Z2
250	-89	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
250	0	0	-840	0	0	0	Bi-linear Z2
250	0	-1342	0	0	0	0	Bi-linear Y2
250	-123	0	0	0	0	0	Bi-linear X2
250	0	0	-1166	0	0	0	Bi-linear Z2
250	0	-1863	0	0	0	0	Bi-linear Y2
250	0	-15	0	0	0	0	Bi-linear Y2
253	-755	0	0	0	0	0	Bi-linear X2
253	0	0	-8138	0	0	0	Bi-linear Z2
253	0	18	0	0	0	0	Bi-linear Y2
260	0	0	-1546	0	0	0	Bi-linear Z2
260	0	-3139	0	0	0	0	Bi-linear Y2
260	-390	0	0	0	0	0	Bi-linear X2
270	-2861	0	0	0	0	0	Bi-linear X2
270	0	0	-321	0	0	0	Bi-linear Z2
270	-638	0	0	0	0	0	Bi-linear X2
270	0	0	-1602	0	0	0	Bi-linear Z2
270	0	-4428	0	0	0	0	Bi-linear Y2
270	-371	0	0	0	0	0	Bi-linear X2
270	0	0	-931	0	0	0	Bi-linear Z2
270	0	-2574	0	0	0	0	Bi-linear Y2
270	0	-20	0	0	0	0	Bi-linear Y2
273	-2400	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
273	0	0	-8264	0	0	0	Bi-linear Z2
273	0	13	0	0	0	0	Bi-linear Y2
290	-4786	0	0	0	0	0	Bi-linear X2
290	0	0	-350	0	0	0	Bi-linear Z2
290	-43	0	0	0	0	0	Bi-linear X2
290	0	0	-70	0	0	0	Bi-linear Z2
290	0	-203	0	0	0	0	Bi-linear Y2
290	-1067	0	0	0	0	0	Bi-linear X2
290	0	0	-1749	0	0	0	Bi-linear Z2
290	0	-5067	0	0	0	0	Bi-linear Y2
290	0	-23	0	0	0	0	Bi-linear Y2
293	-3699	0	0	0	0	0	Bi-linear X2
293	0	0	-8270	0	0	0	Bi-linear Z2
293	0	10	0	0	0	0	Bi-linear Y2
300	0	0	-69	0	0	0	Bi-linear Z2
300	0	-197	0	0	0	0	Bi-linear Y2
300	-43	0	0	0	0	0	Bi-linear X2
346	0	-25	0	0	0	0	Bi-linear Y2
346	3153	0	0	0	0	0	Bi-linear X2
346	0	0	-1246	0	0	0	Bi-linear Z2
350	0	-44	0	0	0	0	Bi-linear Y2
350	3137	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
350	0	0	446	0	0	0	Bi-linear Z2
350	379	0	0	0	0	0	Bi-linear X2
350	0	0	1562	0	0	0	Bi-linear Z2
350	0	-4440	0	0	0	0	Bi-linear Y2
380	27	0	0	0	0	0	Bi-linear X2
380	0	0	-93	0	0	0	Bi-linear Z2
380	0	-288	0	0	0	0	Bi-linear Y2
383	0	-28	0	0	0	0	Bi-linear Y2
383	3674	0	0	0	0	0	Bi-linear X2
383	0	0	-5625	0	0	0	Bi-linear Z2
410	51	0	0	0	0	0	Bi-linear X2
410	0	0	238	0	0	0	Bi-linear Z2
410	0	-2624	0	0	0	0	Bi-linear Y2
420	0	-31	0	0	0	0	Bi-linear Y2
420	207	0	0	0	0	0	Bi-linear X2
420	0	0	-79	0	0	0	Bi-linear Z2
420	34	0	0	0	0	0	Bi-linear X2
420	0	0	-378	0	0	0	Bi-linear Z2
420	0	-6802	0	0	0	0	Bi-linear Y2
430	-144	0	0	0	0	0	Bi-linear X2
430	0	0	-478	0	0	0	Bi-linear Z2
430	0	-2607	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
430	-70	0	0	0	0	0	Bi-linear X2
430	0	0	-233	0	0	0	Bi-linear Z2
430	0	-1271	0	0	0	0	Bi-linear Y2
440	0	-21	0	0	0	0	Bi-linear Y2
440	-2035	0	0	0	0	0	Bi-linear X2
440	0	0	-178	0	0	0	Bi-linear Z2
440	-336	0	0	0	0	0	Bi-linear X2
440	0	0	-852	0	0	0	Bi-linear Z2
440	0	-4768	0	0	0	0	Bi-linear Y2
450	-393	0	0	0	0	0	Bi-linear X2
450	0	0	-319	0	0	0	Bi-linear Z2
450	0	-2426	0	0	0	0	Bi-linear Y2
450	-192	0	0	0	0	0	Bi-linear X2
450	0	0	-155	0	0	0	Bi-linear Z2
450	0	-1183	0	0	0	0	Bi-linear Y2
460	-958	0	0	0	0	0	Bi-linear X2
460	0	0	56	0	0	0	Bi-linear Z2
460	0	-4651	0	0	0	0	Bi-linear Y2
470	-37	0	0	0	0	0	Bi-linear X2
470	0	0	30	0	0	0	Bi-linear Z2
470	0	-300	0	0	0	0	Bi-linear Y2
490	0	-27	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
490	-6959	0	0	0	0	0	Bi-linear X2
490	0	0	-1620	0	0	0	Bi-linear Z2
565	0	-28354	0	0	0	0	Rigid +Y
600	3397	5157	13863	1115	6860	599	Displ. Reaction
635	0	-9520	0	0	0	0	Rigid +Y
680	0	0	12496	0	0	0	Bi-linear Z2
680	0	-43059	0	0	0	0	Bi-linear Y2
680	-1614	0	0	0	0	0	Bi-linear X2
680	0	0	2145	0	0	0	Bi-linear Z2
680	0	-7392	0	0	0	0	Bi-linear Y2
680	-9402	0	0	0	0	0	Bi-linear X2
690	0	0	5891	0	0	0	Bi-linear Z2
690	0	-14007	0	0	0	0	Bi-linear Y2
690	-3130	0	0	0	0	0	Bi-linear X2
691	0	0	7927	0	0	0	Bi-linear Z2
691	0	-15411	0	0	0	0	Bi-linear Y2
691	-3584	0	0	0	0	0	Bi-linear X2
692	0	0	9394	0	0	0	Bi-linear Z2
692	-19797	-19797	0	0	0	0	Bi-linear X2
692	-863	863	0	0	0	0	Bi-linear X2
700	-27426	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
700	0	0	13866	0	0	0	Bi-linear Z2
700	0	-1383	0	0	0	0	Bi-linear Y2
705	-13224	0	0	0	0	0	Bi-linear X2
705	0	0	9475	0	0	0	Bi-linear Z2
705	0	-615	0	0	0	0	Bi-linear Y2
750	0	0	-3636	0	0	0	Bi-linear Z2
750	0	-20801	0	0	0	0	Bi-linear Y2
750	-4977	0	0	0	0	0	Bi-linear X2
755	0	0	-874	0	0	0	Bi-linear Z2
755	0	-2236	0	0	0	0	Bi-linear Y2
755	-3039	0	0	0	0	0	Bi-linear X2
755	0	0	-5089	0	0	0	Bi-linear Z2
755	0	-13024	0	0	0	0	Bi-linear Y2
755	-522	0	0	0	0	0	Bi-linear X2
760	0	0	-6608	0	0	0	Bi-linear Z2
760	0	-2485	0	0	0	0	Bi-linear Y2
760	2119	0	0	0	0	0	Bi-linear X2
770	0	0	-929	0	0	0	Bi-linear Z2
770	0	-165	0	0	0	0	Bi-linear Y2
770	3320	0	0	0	0	0	Bi-linear X2
770	0	0	-5414	0	0	0	Bi-linear Z2
770	0	-960	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
770	570	0	0	0	0	0	Bi-linear X2
780	0	0	-3566	0	0	0	Bi-linear Z2
780	0	43	0	0	0	0	Bi-linear Y2
780	9218	0	0	0	0	0	Bi-linear X2
790	0	0	-446	0	0	0	Bi-linear Z2
790	0	6	0	0	0	0	Bi-linear Y2
790	5527	0	0	0	0	0	Bi-linear X2
790	0	0	-1482	0	0	0	Bi-linear Z2
790	0	20	0	0	0	0	Bi-linear Y2
790	1662	0	0	0	0	0	Bi-linear X2
800	0	0	-2227	0	0	0	Bi-linear Z2
800	0	-663	0	0	0	0	Bi-linear Y2
800	17878	0	0	0	0	0	Bi-linear X2
810	0	0	-2268	0	0	0	Bi-linear Z2
810	0	-1634	0	0	0	0	Bi-linear Y2
810	28773	0	0	0	0	0	Bi-linear X2
820	0	0	-3128	0	0	0	Bi-linear Z2
820	0	1891	0	0	0	0	Bi-linear Y2
820	17630	0	0	0	0	0	Bi-linear X2
830	0	0	-195	0	0	0	Bi-linear Z2
830	0	167	0	0	0	0	Bi-linear Y2
830	933	0	0	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
832	30255	0	0	0	0	0	Bi-linear X2
832	0	0	-1865	0	0	0	Bi-linear Z2
832	0	149	0	0	0	0	Bi-linear Y2
885	0	-6324	0	0	0	0	Rigid +Y
940	7237	6738	17042	1509	-12322	-144	Displ. Reaction
965	0	-21978	0	0	0	0	Rigid +Y
1045	0	-8	0	0	0	0	Bi-linear Y2
1045	-4402	0	0	0	0	0	Bi-linear X2
1045	0	0	-2812	0	0	0	Bi-linear Z2
1105	0	-17734	0	0	0	0	Rigid +Y
1225	0	-13239	0	0	0	0	Rigid +Y
1270	2847	4421	17267	-186	2499	-870	Displ. Reaction
1295	0	-20	0	0	0	0	Bi-linear Y2
1295	16	0	0	0	0	0	Bi-linear X2
1295	0	0	-3123	0	0	0	Bi-linear Z2
1355	0	-20267	0	0	0	0	Rigid +Y
1425	0	-9227	0	0	0	0	Rigid +Y
1470	4076	4752	14017	829	-5162	-836	Displ. Reaction
1550	101	-2426	14628	-3128	-736	535	Displ. Reaction
1650	35	-2394	14235	-3019	-251	32	Displ.

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RESTRAINTS REPORT: Loads On Restraints
CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
							Reaction
1750	-23	-2448	12045	-3136	163	-85	Displ. Reaction
1850	-93	-3004	11550	-4547	602	-292	Displ. Reaction
1925	0	-10886	0	0	0	0	Rigid +Y
1980	3770	4235	15394	-109	-1794	-868	Displ. Reaction
1990	0	0	-3667	0	0	0	Bi-linear Z2
1990	0	-11	0	0	0	0	Bi-linear Y2
1990	-2291	0	0	0	0	0	Bi-linear X2
2060	0	-17842	0	0	0	0	Rigid +Y
2150	-68	-2517	10604	-3426	642	-493	Displ. Reaction
2205	0	0	0	0	0	0	Rigid +Y
2220	0	-3287	0	0	0	0	Rigid +Y
2240	0	0	0	0	0	0	Rigid Z w/gap
2240	0	-3048	0	0	0	0	Rigid +Y
2300	0	-621	0	0	0	0	Rigid +Y
2310	0	0	-3403	0	0	0	Rigid Z w/gap
2310	0	-1230	0	0	0	0	Rigid +Y
2560	-1731	-2733	860	1036	-279	-1194	Displ. Reaction

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
3120	-1560	-1778	822	1508	-940	373	Displ. Reaction
3320	-1494	-3621	790	1270	-995	-1329	Displ. Reaction
4005	0	0	0	0	0	0	Rigid +Y
4010	0	0	0	0	0	0	Rigid +Y
4020	0	-36335	0	0	0	0	Rigid +Y
4030	-34392	0	0	0	0	0	Rigid X w/gap
4030	0	-43371	0	0	0	0	Rigid +Y
4040	0	-51293	0	0	0	0	Rigid +Y
4050	0	-59235	0	0	0	0	Rigid +Y
4050	7929	0	0	0	0	0	Rigid X w/gap
4050	0	0	-79280	0	0	0	Rigid Z w/gap
4120	0	-33806	0	0	0	0	Rigid +Y
4120	-68483	0	0	0	0	0	Rigid X w/gap
4130	0	-90963	0	0	0	0	Rigid +Y
4230	-7928	0	0	0	0	0	Bi-linear X2
4230	0	0	-124	0	0	0	Bi-linear Z2
4230	0	-32	0	0	0	0	Bi-linear Y2
4300	0	107	0	0	0	0	Bi-linear Y2
4300	3861	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
4300	0	0	-1251	0	0	0	Bi-linear Z2
4400	0	0	-1363	0	0	0	Bi-linear Z2
4400	0	123	0	0	0	0	Bi-linear Y2
4400	15050	0	0	0	0	0	Bi-linear X2
5560	0	-16499	0	0	0	0	Rigid +Y
5605	0	0	0	0	0	0	Rigid +Y
5620	-4236	560	1429	11182	9229	-11499	Displ. Reaction
6100	0	-6938	0	0	0	0	Rigid +Y
6110	0	0	164	0	0	0	Rigid Z w/gap
6110	0	-2282	0	0	0	0	Rigid +Y
6120	0	-698	0	0	0	0	Rigid +Y
6130	0	0	0	0	0	0	Rigid Z w/gap
6130	0	-1049	0	0	0	0	Rigid +Y
7000	0	-24658	0	0	0	0	Rigid +Y
7010	0	-72610	0	0	0	0	Rigid +Y
7040	0	-77184	0	0	0	0	Rigid +Y
7060	0	-37914	0	0	0	0	Rigid +Y
7080	0	-64312	0	0	0	0	Rigid +Y
7100	0	-22330	0	0	0	0	Rigid +Y
7100	0	0	-795	0	0	0	Rigid Z w/gap

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CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7210	0	-19395	0	0	0	0	Rigid +Y
7220	0	-47339	0	0	0	0	Rigid +Y
7230	0	-63603	0	0	0	0	Rigid +Y
7280	0	-71126	0	0	0	0	Rigid +Y
7300	0	-20419	0	0	0	0	Rigid +Y
7320	0	-23699	0	0	0	0	Rigid +Y
7330	-5066	0	0	0	0	0	Rigid X w/gap
7330	0	-22822	0	0	0	0	Rigid +Y
7330	0	0	38545	0	0	0	Rigid Z w/gap
7340	0	-23238	0	0	0	0	Rigid +Y
7350	0	-22360	0	0	0	0	Rigid +Y
7350	19380	0	0	0	0	0	Rigid X w/gap
7370	0	-25646	0	0	0	0	Rigid +Y
7380	0	-12674	0	0	0	0	Rigid +Y
7400	0	-40017	0	0	0	0	Rigid +Y
7400	-12343	0	0	0	0	0	Rigid X w/gap
7415	0	-38961	0	0	0	0	Rigid +Y
7445	0	-38798	0	0	0	0	Rigid +Y
7460	0	-39608	0	0	0	0	Rigid +Y
7460	-20182	0	0	0	0	0	Rigid X

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CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
							w/gap
7480	0	-16031	0	0	0	0	Rigid +Y
7480	0	0	-71010	0	0	0	Rigid Z w/gap
7490	0	-12145	0	0	0	0	Rigid +Y
7490	18984	0	0	0	0	0	Rigid X w/gap
7615	0	-99047	0	0	0	0	Rigid +Y
7660	0	-8663	0	0	0	0	Rigid +Y
7670	0	-27532	0	0	0	0	Rigid +Y
7690	0	-25212	0	0	0	0	Rigid +Y
7720	0	-24771	0	0	0	0	Rigid +Y
7740	0	-28202	0	0	0	0	Rigid +Y
7750	-8743	0	0	0	0	0	Rigid X w/gap
7750	0	-7307	0	0	0	0	Rigid +Y
7760	0	-17134	0	0	0	0	Rigid +Y
7790	0	-14600	0	0	0	0	Rigid +Y
7800	0	-15251	0	0	0	0	Rigid +Y
7810	9041	0	0	0	0	0	Rigid X w/gap
7810	0	-15094	0	0	0	0	Rigid +Y
7810	0	0	41053	0	0	0	Rigid Z w/gap

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7820	0	-15095	0	0	0	0	Rigid +Y
7830	-2614	0	0	0	0	0	Rigid X w/gap
7830	0	-15247	0	0	0	0	Rigid +Y
7840	0	-14617	0	0	0	0	Rigid +Y
7870	0	0	0	0	0	0	Rigid X w/gap
7870	0	-17070	0	0	0	0	Rigid +Y
7880	0	-6916	0	0	0	0	Rigid +Y
8020	0	0	0	0	0	0	Rigid +Y
8020	-244	0	0	0	0	0	Rigid X w/gap
8120	0	0	0	0	0	0	Rigid +Y
8120	0	0	0	0	0	0	Rigid X w/gap
8220	0	0	0	0	0	0	Rigid X w/gap
8220	0	0	0	0	0	0	Rigid +Y
8320	0	0	0	0	0	0	Rigid +Y
8320	0	0	0	0	0	0	Rigid X w/gap
8420	234	0	0	0	0	0	Rigid X w/gap
8420	0	0	0	0	0	0	Rigid +Y
9100	0	-10931	0	0	0	0	Bi-linear Y2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
9100	0	0	-2029	0	0	0	Bi-linear Z2
9100	-125	0	0	0	0	0	Bi-linear X2
9101	0	-15174	0	0	0	0	Bi-linear Y2
9101	0	0	-3372	0	0	0	Bi-linear Z2
9101	-77	0	0	0	0	0	Bi-linear X2
9110	0	0	15140	0	0	0	Bi-linear Z2
9110	0	73	0	0	0	0	Bi-linear Y2
9110	161	0	0	0	0	0	Bi-linear X2
9120	0	0	3866	0	0	0	Bi-linear Z2
9120	0	87	0	0	0	0	Bi-linear Y2
9120	115	0	0	0	0	0	Bi-linear X2
9150	0	-18843	0	0	0	0	Rigid +Y
9250	0	-45456	0	0	0	0	Rigid +Y
9300	0	-12141	0	0	0	0	Rigid +Y
9335	0	-76335	0	0	0	0	Rigid +Y
9370	0	0	0	0	0	0	Rigid X w/gap
9370	0	-23162	0	0	0	0	Rigid +Y
9622	0	-59202	0	0	0	0	Rigid +Y
9660	0	-11278	0	0	0	0	Rigid +Y
9690	0	-52777	0	0	0	0	Rigid +Y
9900	0	-16994	0	0	0	0	Rigid +Y

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
9960	0	0	7785	0	0	0	Bi-linear Z2
9960	0	-47	0	0	0	0	Bi-linear Y2
9960	166	0	0	0	0	0	Bi-linear X2
9961	0	0	12698	0	0	0	Bi-linear Z2
9961	0	-114	0	0	0	0	Bi-linear Y2
9961	94	0	0	0	0	0	Bi-linear X2
9962	0	4062	4062	0	0	0	Bi-linear X2
9962	0	-363	363	0	0	0	Bi-linear X2
9962	-62	0	0	0	0	0	Bi-linear X2
10010	0	-10055	0	0	0	0	Bi-linear Y2
10010	0	0	1815	0	0	0	Bi-linear Z2
10010	-318	0	0	0	0	0	Bi-linear X2
10011	0	-7981	0	0	0	0	Bi-linear Y2
10011	0	0	3068	0	0	0	Bi-linear Z2
10011	-84	0	0	0	0	0	Bi-linear X2
10012	0	-2682	0	0	0	0	Bi-linear Y2
10012	0	0	2818	0	0	0	Bi-linear Z2
10012	17	0	0	0	0	0	Bi-linear X2
10020	0	41	0	0	0	0	Bi-linear Y2
10020	0	0	408	0	0	0	Bi-linear Z2
10020	0	0	0	0	0	0	Bi-linear X2
10030	0	24	0	0	0	0	Bi-linear Y2

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CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10030	0	0	317	0	0	0	Bi-linear Z2
10030	0	0	0	0	0	0	Bi-linear X2
10100	1116	0	0	0	0	0	Bi-linear X2
10100	0	0	661	0	0	0	Bi-linear Z2
10100	0	-360	0	0	0	0	Bi-linear Y2
10110	65	0	0	0	0	0	Bi-linear X2
10110	0	-9377	0	0	0	0	Bi-linear Y2
10110	0	0	-2249	0	0	0	Bi-linear Z2
10111	29	0	0	0	0	0	Bi-linear X2
10111	0	-7449	0	0	0	0	Bi-linear Y2
10111	0	0	-2862	0	0	0	Bi-linear Z2
10112	6	0	0	0	0	0	Bi-linear X2
10112	0	-2242	0	0	0	0	Bi-linear Y2
10112	0	0	-2156	0	0	0	Bi-linear Z2
10120	-120	0	0	0	0	0	Bi-linear X2
10120	0	0	-10478	0	0	0	Bi-linear Z2
10120	0	-96	0	0	0	0	Bi-linear Y2
10121	13	0	0	0	0	0	Bi-linear X2
10121	0	0	-19049	0	0	0	Bi-linear Z2
10121	0	-209	0	0	0	0	Bi-linear Y2
10122	26	0	0	0	0	0	Bi-linear X2
10122	0	-7320	-7320	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10122	0	276	-276	0	0	0	Bi-linear X2
10135	0	-8865	0	0	0	0	Rigid +Y
10140	0	-26719	0	0	0	0	Rigid +Y
10160	0	-20755	0	0	0	0	Rigid +Y
10180	0	-25609	0	0	0	0	Rigid +Y
10200	0	0	0	0	0	0	Rigid Z w/gap
10200	0	-9684	0	0	0	0	Rigid +Y
11000	0	0	-4239	0	0	0	Bi-linear Z2
11000	21	0	0	0	0	0	Bi-linear X2
11000	0	-4028	0	0	0	0	Bi-linear Y2
11010	0	0	-1988	0	0	0	Bi-linear Z2
11010	11	0	0	0	0	0	Bi-linear X2
11010	0	1567	0	0	0	0	Bi-linear Y2
11020	0	0	1596	0	0	0	Bi-linear Z2
11020	27	0	0	0	0	0	Bi-linear X2
11020	0	1385	0	0	0	0	Bi-linear Y2
11030	0	0	5184	0	0	0	Bi-linear Z2
11030	-173	0	0	0	0	0	Bi-linear X2
11030	0	-6643	0	0	0	0	Bi-linear Y2
11040	0	0	4882	0	0	0	Bi-linear Z2
11040	-126	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11040	0	-16700	0	0	0	0	Bi-linear Y2
11041	0	0	855	0	0	0	Bi-linear Z2
11041	9	0	0	0	0	0	Bi-linear X2
11041	0	-2099	0	0	0	0	Bi-linear Y2
11042	0	324	324	0	0	0	Bi-linear X2
11042	60	0	0	0	0	0	Bi-linear X2
11042	0	-6516	6516	0	0	0	Bi-linear X2
11100	0	-364	0	0	0	0	Bi-linear Y2
11100	0	0	7362	0	0	0	Bi-linear Z2
11100	102	0	0	0	0	0	Bi-linear X2
11110	0	857	0	0	0	0	Bi-linear Y2
11110	0	0	7863	0	0	0	Bi-linear Z2
11110	11	0	0	0	0	0	Bi-linear X2
11200	9	0	0	0	0	0	Bi-linear X2
11200	0	1295	0	0	0	0	Bi-linear Y2
11200	0	0	-4289	0	0	0	Bi-linear Z2
11210	-133	0	0	0	0	0	Bi-linear X2
11210	0	2379	0	0	0	0	Bi-linear Y2
11210	0	0	-1814	0	0	0	Bi-linear Z2
11211	-194	0	0	0	0	0	Bi-linear X2
11211	0	-4210	0	0	0	0	Bi-linear Y2
11211	0	0	-454	0	0	0	Bi-linear Z2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11212	-258	0	0	0	0	0	Bi-linear X2
11212	0	-15330	0	0	0	0	Bi-linear Y2
11212	0	0	17	0	0	0	Bi-linear Z2
11213	116	0	0	0	0	0	Bi-linear X2
11213	0	-17235	0	0	0	0	Bi-linear Y2
11213	0	0	327	0	0	0	Bi-linear Z2
11214	263	0	0	0	0	0	Bi-linear X2
11214	0	-3369	3369	0	0	0	Bi-linear X2
11214	0	-94	-94	0	0	0	Bi-linear X2
12000	0	0	-605	0	0	0	Bi-linear Z2
12000	0	471	0	0	0	0	Bi-linear Y2
12000	0	27	0	0	0	0	Bi-linear Y2
12000	30256	0	0	0	0	0	Bi-linear X2
12000	0	0	-911	0	0	0	Bi-linear Z2
12000	3030	0	0	0	0	0	Bi-linear X2
12025	0	-4394	0	0	0	0	Rigid +Y
13000	0	0	0	0	0	0	Bi-linear Y2
13000	18393	0	0	0	0	0	Bi-linear X2
13000	0	0	-746	0	0	0	Bi-linear Z2
13000	2540	0	0	0	0	0	Bi-linear X2
13000	0	0	-850	0	0	0	Bi-linear Z2
13000	0	14	0	0	0	0	Bi-linear Y2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
13025	0	-4110	0	0	0	0	Rigid +Y
14000	-2948	0	0	0	0	0	Bi-linear X2
14000	0	0	4891	0	0	0	Bi-linear Z2
14000	0	-13385	0	0	0	0	Bi-linear Y2
15000	0	0	-551	0	0	0	Bi-linear Z2
15000	630	0	0	0	0	0	Bi-linear X2
15000	0	0	-2136	0	0	0	Bi-linear Z2
15000	0	-7013	0	0	0	0	Bi-linear Y2
15000	0	-39	0	0	0	0	Bi-linear Y2
15000	4713	0	0	0	0	0	Bi-linear X2
16000	0	0	168	0	0	0	Bi-linear Z2
16000	-391	0	0	0	0	0	Bi-linear X2
16000	0	0	291	0	0	0	Bi-linear Z2
16000	0	-3053	0	0	0	0	Bi-linear Y2
16000	0	-38	0	0	0	0	Bi-linear Y2
16000	-6547	0	0	0	0	0	Bi-linear X2
17000	0	-154	0	0	0	0	Bi-linear Y2
17000	-8093	0	0	0	0	0	Bi-linear X2
17000	0	0	-1041	0	0	0	Bi-linear Z2
17000	-1118	0	0	0	0	0	Bi-linear X2
17000	0	0	-1186	0	0	0	Bi-linear Z2
17000	0	-4665	0	0	0	0	Bi-linear Y2

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CASE 2 (OPE) W+D1+T1+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
17025	0	-3947	0	0	0	0	Rigid +Y
18000	-4283	0	0	0	0	0	Bi-linear X2
18000	0	0	-96	0	0	0	Bi-linear Z2
18000	0	-19	0	0	0	0	Bi-linear Y2
18000	-707	0	0	0	0	0	Bi-linear X2
18000	0	0	-460	0	0	0	Bi-linear Z2
18000	0	-4234	0	0	0	0	Bi-linear Y2
19000	0	-472	0	0	0	0	Bi-linear Y2
19000	0	-16	0	0	0	0	Bi-linear Y2
19000	5146	0	0	0	0	0	Bi-linear X2
19000	0	0	-1448	0	0	0	Bi-linear Z2
19000	711	0	0	0	0	0	Bi-linear X2
19000	0	0	-1650	0	0	0	Bi-linear Z2
19025	0	-3544	0	0	0	0	Rigid +Y

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RESTRAINTS REPORT: Loads On Restraints
CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10	0	-130	0	0	0	0	Bi-linear Y2
10	-196	0	0	0	0	0	Bi-linear X2
10	0	0	-13	0	0	0	Bi-linear Z2
75	0	-122999	0	0	0	0	Rigid +Y
100	0	27	0	0	0	0	Bi-linear Y2
100	24	0	0	0	0	0	Bi-linear X2
100	0	0	-93	0	0	0	Bi-linear Z2
101	0	40	0	0	0	0	Bi-linear Y2
101	14	0	0	0	0	0	Bi-linear X2
101	0	0	-89	0	0	0	Bi-linear Z2
102	0	15	-15	0	0	0	Bi-linear X2
102	9	0	0	0	0	0	Bi-linear X2
102	0	223	223	0	0	0	Bi-linear X2
125	-105	0	0	0	0	0	Bi-linear X2
125	0	0	-10	0	0	0	Bi-linear Z2
125	0	-58	0	0	0	0	Bi-linear Y2
150	20	0	0	0	0	0	Bi-linear X2
150	0	0	128	0	0	0	Bi-linear Z2
150	1	0	0	0	0	0	Bi-linear X2
150	0	0	144	0	0	0	Bi-linear Z2

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
150	0	-1458	0	0	0	0	Bi-linear Y2
150	2	0	0	0	0	0	Bi-linear X2
150	0	0	220	0	0	0	Bi-linear Z2
150	0	-2223	0	0	0	0	Bi-linear Y2
150	0	-58	0	0	0	0	Bi-linear Y2
160	0	0	328	0	0	0	Bi-linear Z2
160	0	-4196	0	0	0	0	Bi-linear Y2
160	4	0	0	0	0	0	Bi-linear X2
180	0	0	61	0	0	0	Bi-linear Z2
180	0	-385	0	0	0	0	Bi-linear Y2
180	0	-3	0	0	0	0	Bi-linear Y2
180	18	0	0	0	0	0	Bi-linear X2
180	0	0	17	0	0	0	Bi-linear Z2
180	0	0	0	0	0	0	Bi-linear X2
180	0	0	3	0	0	0	Bi-linear Z2
180	0	-22	0	0	0	0	Bi-linear Y2
180	3	0	0	0	0	0	Bi-linear X2
183	-136	0	0	0	0	0	Bi-linear X2
183	0	0	2	0	0	0	Bi-linear Z2
183	0	-3	0	0	0	0	Bi-linear Y2
190	0	0	3	0	0	0	Bi-linear Z2
190	0	-15	0	0	0	0	Bi-linear Y2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
190	0	0	0	0	0	0	Bi-linear X2
220	0	0	516	0	0	0	Bi-linear Z2
220	0	-4415	0	0	0	0	Bi-linear Y2
220	3	0	0	0	0	0	Bi-linear X2
230	17	0	0	0	0	0	Bi-linear X2
230	0	0	58	0	0	0	Bi-linear Z2
230	2	0	0	0	0	0	Bi-linear X2
230	0	0	122	0	0	0	Bi-linear Z2
230	0	-746	0	0	0	0	Bi-linear Y2
230	2	0	0	0	0	0	Bi-linear X2
230	0	0	184	0	0	0	Bi-linear Z2
230	0	-1124	0	0	0	0	Bi-linear Y2
230	0	-8	0	0	0	0	Bi-linear Y2
232	168	0	0	0	0	0	Bi-linear X2
232	0	0	37	0	0	0	Bi-linear Z2
232	0	-8	0	0	0	0	Bi-linear Y2
240	0	0	105	0	0	0	Bi-linear Z2
240	0	-506	0	0	0	0	Bi-linear Y2
240	4	0	0	0	0	0	Bi-linear X2
250	17	0	0	0	0	0	Bi-linear X2
250	0	0	2	0	0	0	Bi-linear Z2
250	2	0	0	0	0	0	Bi-linear X2

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
250	0	0	4	0	0	0	Bi-linear Z2
250	0	-31	0	0	0	0	Bi-linear Y2
250	2	0	0	0	0	0	Bi-linear X2
250	0	0	6	0	0	0	Bi-linear Z2
250	0	-43	0	0	0	0	Bi-linear Y2
250	0	-0	0	0	0	0	Bi-linear Y2
253	22	0	0	0	0	0	Bi-linear X2
253	0	0	-3	0	0	0	Bi-linear Z2
253	0	-0	0	0	0	0	Bi-linear Y2
260	0	0	5	0	0	0	Bi-linear Z2
260	0	11	0	0	0	0	Bi-linear Y2
260	4	0	0	0	0	0	Bi-linear X2
270	17	0	0	0	0	0	Bi-linear X2
270	0	0	6	0	0	0	Bi-linear Z2
270	4	0	0	0	0	0	Bi-linear X2
270	0	0	29	0	0	0	Bi-linear Z2
270	0	10	0	0	0	0	Bi-linear Y2
270	2	0	0	0	0	0	Bi-linear X2
270	0	0	17	0	0	0	Bi-linear Z2
270	0	6	0	0	0	0	Bi-linear Y2
270	0	0	0	0	0	0	Bi-linear Y2
273	6	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
273	0	0	8	0	0	0	Bi-linear Z2
273	0	0	0	0	0	0	Bi-linear Y2
290	17	0	0	0	0	0	Bi-linear X2
290	0	0	9	0	0	0	Bi-linear Z2
290	0	0	0	0	0	0	Bi-linear X2
290	0	0	2	0	0	0	Bi-linear Z2
290	0	-21	0	0	0	0	Bi-linear Y2
290	4	0	0	0	0	0	Bi-linear X2
290	0	0	45	0	0	0	Bi-linear Z2
290	0	-517	0	0	0	0	Bi-linear Y2
290	0	-2	0	0	0	0	Bi-linear Y2
293	-10	0	0	0	0	0	Bi-linear X2
293	0	0	10	0	0	0	Bi-linear Z2
293	0	-2	0	0	0	0	Bi-linear Y2
300	0	0	2	0	0	0	Bi-linear Z2
300	0	-22	0	0	0	0	Bi-linear Y2
300	0	0	0	0	0	0	Bi-linear X2
346	0	-6	0	0	0	0	Bi-linear Y2
346	-60	0	0	0	0	0	Bi-linear X2
346	0	0	63	0	0	0	Bi-linear Z2
350	0	-6	0	0	0	0	Bi-linear Y2
350	103	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
350	0	0	225	0	0	0	Bi-linear Z2
350	12	0	0	0	0	0	Bi-linear X2
350	0	0	789	0	0	0	Bi-linear Z2
350	0	-654	0	0	0	0	Bi-linear Y2
380	1	0	0	0	0	0	Bi-linear X2
380	0	0	8	0	0	0	Bi-linear Z2
380	0	-200	0	0	0	0	Bi-linear Y2
383	0	-25	0	0	0	0	Bi-linear Y2
383	295	0	0	0	0	0	Bi-linear X2
383	0	0	-7	0	0	0	Bi-linear Z2
410	5	0	0	0	0	0	Bi-linear X2
410	0	0	106	0	0	0	Bi-linear Z2
410	0	-2144	0	0	0	0	Bi-linear Y2
420	0	-25	0	0	0	0	Bi-linear Y2
420	100	0	0	0	0	0	Bi-linear X2
420	0	0	30	0	0	0	Bi-linear Z2
420	16	0	0	0	0	0	Bi-linear X2
420	0	0	142	0	0	0	Bi-linear Z2
420	0	-5496	0	0	0	0	Bi-linear Y2
430	11	0	0	0	0	0	Bi-linear X2
430	0	0	5	0	0	0	Bi-linear Z2
430	0	-1946	0	0	0	0	Bi-linear Y2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
430	6	0	0	0	0	0	Bi-linear X2
430	0	0	3	0	0	0	Bi-linear Z2
430	0	-949	0	0	0	0	Bi-linear Y2
440	0	-16	0	0	0	0	Bi-linear Y2
440	103	0	0	0	0	0	Bi-linear X2
440	0	0	4	0	0	0	Bi-linear Z2
440	17	0	0	0	0	0	Bi-linear X2
440	0	0	21	0	0	0	Bi-linear Z2
440	0	-3470	0	0	0	0	Bi-linear Y2
450	12	0	0	0	0	0	Bi-linear X2
450	0	0	9	0	0	0	Bi-linear Z2
450	0	-1809	0	0	0	0	Bi-linear Y2
450	6	0	0	0	0	0	Bi-linear X2
450	0	0	4	0	0	0	Bi-linear Z2
450	0	-882	0	0	0	0	Bi-linear Y2
460	18	0	0	0	0	0	Bi-linear X2
460	0	0	23	0	0	0	Bi-linear Z2
460	0	-4083	0	0	0	0	Bi-linear Y2
470	1	0	0	0	0	0	Bi-linear X2
470	0	0	14	0	0	0	Bi-linear Z2
470	0	-264	0	0	0	0	Bi-linear Y2
490	0	-34	0	0	0	0	Bi-linear Y2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
490	-101	0	0	0	0	0	Bi-linear X2
490	0	0	-31	0	0	0	Bi-linear Z2
565	0	-18937	0	0	0	0	Rigid +Y
600	190	1130	171	1025	-890	431	Displ. Reaction
635	0	-13174	0	0	0	0	Rigid +Y
680	0	0	-100	0	0	0	Bi-linear Z2
680	0	-6677	0	0	0	0	Bi-linear Y2
680	-1	0	0	0	0	0	Bi-linear X2
680	0	0	-17	0	0	0	Bi-linear Z2
680	0	-1146	0	0	0	0	Bi-linear Y2
680	-6	0	0	0	0	0	Bi-linear X2
690	0	0	-33	0	0	0	Bi-linear Z2
690	0	-2260	0	0	0	0	Bi-linear Y2
690	-2	0	0	0	0	0	Bi-linear X2
691	0	0	-36	0	0	0	Bi-linear Z2
691	0	-2574	0	0	0	0	Bi-linear Y2
691	-2	0	0	0	0	0	Bi-linear X2
692	0	0	-20	0	0	0	Bi-linear Z2
692	-1162	-1162	0	0	0	0	Bi-linear X2
692	137	-137	0	0	0	0	Bi-linear X2
700	21	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
700	0	0	8	0	0	0	Bi-linear Z2
700	0	-288	0	0	0	0	Bi-linear Y2
705	90	0	0	0	0	0	Bi-linear X2
705	0	0	22	0	0	0	Bi-linear Z2
705	0	-149	0	0	0	0	Bi-linear Y2
750	0	0	-25	0	0	0	Bi-linear Z2
750	0	-3300	0	0	0	0	Bi-linear Y2
750	-6	0	0	0	0	0	Bi-linear X2
755	0	0	0	0	0	0	Bi-linear Z2
755	0	-378	0	0	0	0	Bi-linear Y2
755	-6	0	0	0	0	0	Bi-linear X2
755	0	0	0	0	0	0	Bi-linear Z2
755	0	-2202	0	0	0	0	Bi-linear Y2
755	-1	0	0	0	0	0	Bi-linear X2
760	0	0	59	0	0	0	Bi-linear Z2
760	0	-970	0	0	0	0	Bi-linear Y2
760	-6	0	0	0	0	0	Bi-linear X2
770	0	0	10	0	0	0	Bi-linear Z2
770	0	-124	0	0	0	0	Bi-linear Y2
770	-5	0	0	0	0	0	Bi-linear X2
770	0	0	59	0	0	0	Bi-linear Z2
770	0	-720	0	0	0	0	Bi-linear Y2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
770	-1	0	0	0	0	0	Bi-linear X2
780	0	0	64	0	0	0	Bi-linear Z2
780	0	-573	0	0	0	0	Bi-linear Y2
780	-6	0	0	0	0	0	Bi-linear X2
790	0	0	9	0	0	0	Bi-linear Z2
790	0	-82	0	0	0	0	Bi-linear Y2
790	-3	0	0	0	0	0	Bi-linear X2
790	0	0	29	0	0	0	Bi-linear Z2
790	0	-271	0	0	0	0	Bi-linear Y2
790	-1	0	0	0	0	0	Bi-linear X2
800	0	0	51	0	0	0	Bi-linear Z2
800	0	-606	0	0	0	0	Bi-linear Y2
800	-8	0	0	0	0	0	Bi-linear X2
810	0	0	38	0	0	0	Bi-linear Z2
810	0	-1198	0	0	0	0	Bi-linear Y2
810	-9	0	0	0	0	0	Bi-linear X2
820	0	0	34	0	0	0	Bi-linear Z2
820	0	-1480	0	0	0	0	Bi-linear Y2
820	-5	0	0	0	0	0	Bi-linear X2
830	0	0	2	0	0	0	Bi-linear Z2
830	0	-88	0	0	0	0	Bi-linear Y2
830	-0	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
832	53	0	0	0	0	0	Bi-linear X2
832	0	0	1	0	0	0	Bi-linear Z2
832	0	-16	0	0	0	0	Bi-linear Y2
885	0	-10946	0	0	0	0	Rigid +Y
940	10	-1562	-247	-808	-211	-295	Displ. Reaction
965	0	-15020	0	0	0	0	Rigid +Y
1045	0	-15	0	0	0	0	Bi-linear Y2
1045	-1	0	0	0	0	0	Bi-linear X2
1045	0	0	42	0	0	0	Bi-linear Z2
1105	0	-14573	0	0	0	0	Rigid +Y
1225	0	-10746	0	0	0	0	Rigid +Y
1270	-115	-1793	-201	-967	131	-313	Displ. Reaction
1295	0	-25	0	0	0	0	Bi-linear Y2
1295	156	0	0	0	0	0	Bi-linear X2
1295	0	0	20	0	0	0	Bi-linear Z2
1355	0	-15269	0	0	0	0	Rigid +Y
1425	0	-10784	0	0	0	0	Rigid +Y
1470	-107	-1597	-402	-793	-42	-320	Displ. Reaction
1550	-7	-2426	-176	-3447	53	38	Displ. Reaction
1650	7	-2361	-280	-3266	-56	-37	Displ.

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
							Reaction
1750	1	-2452	-43	-3518	-6	-1	Displ. Reaction
1850	0	-2466	-87	-3446	-1	4	Displ. Reaction
1925	0	-10667	0	0	0	0	Rigid +Y
1980	-110	-1881	-307	-1002	58	-337	Displ. Reaction
1990	0	0	37	0	0	0	Bi-linear Z2
1990	0	-16	0	0	0	0	Bi-linear Y2
1990	9	0	0	0	0	0	Bi-linear X2
2060	0	-14475	0	0	0	0	Rigid +Y
2150	-1	-2428	-62	-3453	6	7	Displ. Reaction
2205	0	-1439	0	0	0	0	Rigid +Y
2220	0	-2220	0	0	0	0	Rigid +Y
2240	0	0	0	0	0	0	Rigid Z w/gap
2240	0	-2721	0	0	0	0	Rigid +Y
2300	0	-1909	0	0	0	0	Rigid +Y
2310	0	0	0	0	0	0	Rigid Z w/gap
2310	0	-2657	0	0	0	0	Rigid +Y
2560	14	-2148	39	908	43	-1141	Displ. Reaction

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
3120	27	-402	-0	893	41	440	Displ. Reaction
3320	-5	-2782	14	898	23	-1246	Displ. Reaction
4005	0	-96961	0	0	0	0	Rigid +Y
4010	0	-29350	0	0	0	0	Rigid +Y
4020	0	-46492	0	0	0	0	Rigid +Y
4030	0	0	0	0	0	0	Rigid X w/gap
4030	0	-34686	0	0	0	0	Rigid +Y
4040	0	-53455	0	0	0	0	Rigid +Y
4050	0	-58360	0	0	0	0	Rigid +Y
4050	0	0	0	0	0	0	Rigid X w/gap
4050	0	0	0	0	0	0	Rigid Z w/gap
4120	0	-46623	0	0	0	0	Rigid +Y
4120	0	0	0	0	0	0	Rigid X w/gap
4130	0	-65232	0	0	0	0	Rigid +Y
4230	-196	0	0	0	0	0	Bi-linear X2
4230	0	0	27	0	0	0	Bi-linear Z2
4230	0	-25	0	0	0	0	Bi-linear Y2
4300	0	-8	0	0	0	0	Bi-linear Y2
4300	-63	0	0	0	0	0	Bi-linear X2

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
4300	0	0	26	0	0	0	Bi-linear Z2
4400	0	0	8	0	0	0	Bi-linear Z2
4400	0	-5	0	0	0	0	Bi-linear Y2
4400	-27	0	0	0	0	0	Bi-linear X2
5560	0	-8503	0	0	0	0	Rigid +Y
5605	0	-1894	0	0	0	0	Rigid +Y
5620	92	-3462	169	-73	-254	271	Displ. Reaction
6100	0	-6938	0	0	0	0	Rigid +Y
6110	0	0	0	0	0	0	Rigid Z w/gap
6110	0	-2282	0	0	0	0	Rigid +Y
6120	0	-698	0	0	0	0	Rigid +Y
6130	0	0	0	0	0	0	Rigid Z w/gap
6130	0	-1049	0	0	0	0	Rigid +Y
7000	0	-26960	0	0	0	0	Rigid +Y
7010	0	-69414	0	0	0	0	Rigid +Y
7040	0	-77319	0	0	0	0	Rigid +Y
7060	0	-39566	0	0	0	0	Rigid +Y
7080	0	-63917	0	0	0	0	Rigid +Y
7100	0	-22394	0	0	0	0	Rigid +Y
7100	0	0	0	0	0	0	Rigid Z w/gap

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NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7210	0	-53339	0	0	0	0	Rigid +Y
7220	0	-24961	0	0	0	0	Rigid +Y
7230	0	-64931	0	0	0	0	Rigid +Y
7280	0	-71602	0	0	0	0	Rigid +Y
7300	0	-20421	0	0	0	0	Rigid +Y
7320	0	-23698	0	0	0	0	Rigid +Y
7330	0	0	0	0	0	0	Rigid X w/gap
7330	0	-22822	0	0	0	0	Rigid +Y
7330	0	0	0	0	0	0	Rigid Z w/gap
7340	0	-23238	0	0	0	0	Rigid +Y
7350	0	-22359	0	0	0	0	Rigid +Y
7350	0	0	0	0	0	0	Rigid X w/gap
7370	0	-25649	0	0	0	0	Rigid +Y
7380	0	-12661	0	0	0	0	Rigid +Y
7400	0	-40045	0	0	0	0	Rigid +Y
7400	0	0	0	0	0	0	Rigid X w/gap
7415	0	-38942	0	0	0	0	Rigid +Y
7445	0	-38800	0	0	0	0	Rigid +Y
7460	0	-39608	0	0	0	0	Rigid +Y
7460	0	0	0	0	0	0	Rigid X

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
							w/gap
7480	0	-16031	0	0	0	0	Rigid +Y
7480	0	0	0	0	0	0	Rigid Z w/gap
7490	0	-12145	0	0	0	0	Rigid +Y
7490	0	0	0	0	0	0	Rigid X w/gap
7615	0	-97803	0	0	0	0	Rigid +Y
7660	0	-9881	0	0	0	0	Rigid +Y
7670	0	-27266	0	0	0	0	Rigid +Y
7690	0	-25196	0	0	0	0	Rigid +Y
7720	0	-24775	0	0	0	0	Rigid +Y
7740	0	-28212	0	0	0	0	Rigid +Y
7750	0	0	0	0	0	0	Rigid X w/gap
7750	0	-7302	0	0	0	0	Rigid +Y
7760	0	-17136	0	0	0	0	Rigid +Y
7790	0	-14600	0	0	0	0	Rigid +Y
7800	0	-15251	0	0	0	0	Rigid +Y
7810	0	0	0	0	0	0	Rigid X w/gap
7810	0	-15094	0	0	0	0	Rigid +Y
7810	0	0	0	0	0	0	Rigid Z w/gap

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7820	0	-15095	0	0	0	0	Rigid +Y
7830	0	0	0	0	0	0	Rigid X w/gap
7830	0	-15247	0	0	0	0	Rigid +Y
7840	0	-14617	0	0	0	0	Rigid +Y
7870	0	0	0	0	0	0	Rigid X w/gap
7870	0	-17070	0	0	0	0	Rigid +Y
7880	0	-6916	0	0	0	0	Rigid +Y
8020	0	-6065	0	0	0	0	Rigid +Y
8020	0	0	0	0	0	0	Rigid X w/gap
8120	0	-8122	0	0	0	0	Rigid +Y
8120	0	0	0	0	0	0	Rigid X w/gap
8220	0	0	0	0	0	0	Rigid X w/gap
8220	0	-5943	0	0	0	0	Rigid +Y
8320	0	-6431	0	0	0	0	Rigid +Y
8320	0	0	0	0	0	0	Rigid X w/gap
8420	0	0	0	0	0	0	Rigid X w/gap
8420	0	-6092	0	0	0	0	Rigid +Y
9100	0	1448	0	0	0	0	Bi-linear Y2

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
9100	0	0	-13	0	0	0	Bi-linear Z2
9100	41	0	0	0	0	0	Bi-linear X2
9101	0	1046	0	0	0	0	Bi-linear Y2
9101	0	0	-25	0	0	0	Bi-linear Z2
9101	77	0	0	0	0	0	Bi-linear X2
9110	0	0	-185	0	0	0	Bi-linear Z2
9110	0	38	0	0	0	0	Bi-linear Y2
9110	-63	0	0	0	0	0	Bi-linear X2
9120	0	0	-167	0	0	0	Bi-linear Z2
9120	0	25	0	0	0	0	Bi-linear Y2
9120	-267	0	0	0	0	0	Bi-linear X2
9150	0	-59266	0	0	0	0	Rigid +Y
9250	0	-41413	0	0	0	0	Rigid +Y
9300	0	-13521	0	0	0	0	Rigid +Y
9335	0	-76398	0	0	0	0	Rigid +Y
9370	0	0	0	0	0	0	Rigid X w/gap
9370	0	-22850	0	0	0	0	Rigid +Y
9622	0	-59517	0	0	0	0	Rigid +Y
9660	0	-12534	0	0	0	0	Rigid +Y
9690	0	-47266	0	0	0	0	Rigid +Y
9900	0	-33678	0	0	0	0	Rigid +Y

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
9960	0	0	-100	0	0	0	Bi-linear Z2
9960	0	5	0	0	0	0	Bi-linear Y2
9960	192	0	0	0	0	0	Bi-linear X2
9961	0	0	-189	0	0	0	Bi-linear Z2
9961	0	9	0	0	0	0	Bi-linear Y2
9961	135	0	0	0	0	0	Bi-linear X2
9962	0	-15	-15	0	0	0	Bi-linear X2
9962	0	9	-9	0	0	0	Bi-linear X2
9962	-37	0	0	0	0	0	Bi-linear X2
10010	0	430	0	0	0	0	Bi-linear Y2
10010	0	0	-31	0	0	0	Bi-linear Z2
10010	-278	0	0	0	0	0	Bi-linear X2
10011	0	228	0	0	0	0	Bi-linear Y2
10011	0	0	-44	0	0	0	Bi-linear Z2
10011	-105	0	0	0	0	0	Bi-linear X2
10012	0	46	0	0	0	0	Bi-linear Y2
10012	0	0	-37	0	0	0	Bi-linear Z2
10012	-4	0	0	0	0	0	Bi-linear X2
10020	0	-1	0	0	0	0	Bi-linear Y2
10020	0	0	-4	0	0	0	Bi-linear Z2
10020	1	0	0	0	0	0	Bi-linear X2
10030	0	-1	0	0	0	0	Bi-linear Y2

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10030	0	0	-3	0	0	0	Bi-linear Z2
10030	0	0	0	0	0	0	Bi-linear X2
10100	-14	0	0	0	0	0	Bi-linear X2
10100	0	0	-99	0	0	0	Bi-linear Z2
10100	0	-197	0	0	0	0	Bi-linear Y2
10110	-505	0	0	0	0	0	Bi-linear X2
10110	0	-2125	0	0	0	0	Bi-linear Y2
10110	0	0	-46	0	0	0	Bi-linear Z2
10111	-220	0	0	0	0	0	Bi-linear X2
10111	0	-1104	0	0	0	0	Bi-linear Y2
10111	0	0	-69	0	0	0	Bi-linear Z2
10112	-18	0	0	0	0	0	Bi-linear X2
10112	0	-154	0	0	0	0	Bi-linear Y2
10112	0	0	-60	0	0	0	Bi-linear Z2
10120	649	0	0	0	0	0	Bi-linear X2
10120	0	0	-568	0	0	0	Bi-linear Z2
10120	0	-53	0	0	0	0	Bi-linear Y2
10121	78	0	0	0	0	0	Bi-linear X2
10121	0	0	-571	0	0	0	Bi-linear Z2
10121	0	-76	0	0	0	0	Bi-linear Y2
10122	-117	0	0	0	0	0	Bi-linear X2
10122	0	-508	-508	0	0	0	Bi-linear X2

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RESTRAINTS REPORT: Loads On Restraints
CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10122	0	-14	14	0	0	0	Bi-linear X2
10135	0	-40050	0	0	0	0	Rigid +Y
10140	0	-15133	0	0	0	0	Rigid +Y
10160	0	-23620	0	0	0	0	Rigid +Y
10180	0	-24939	0	0	0	0	Rigid +Y
10200	0	0	0	0	0	0	Rigid Z w/gap
10200	0	-9791	0	0	0	0	Rigid +Y
11000	0	0	-42	0	0	0	Bi-linear Z2
11000	29	0	0	0	0	0	Bi-linear X2
11000	0	-138	0	0	0	0	Bi-linear Y2
11010	0	0	-52	0	0	0	Bi-linear Z2
11010	-6	0	0	0	0	0	Bi-linear X2
11010	0	-139	0	0	0	0	Bi-linear Y2
11020	0	0	-50	0	0	0	Bi-linear Z2
11020	3	0	0	0	0	0	Bi-linear X2
11020	0	-29	0	0	0	0	Bi-linear Y2
11030	0	0	-48	0	0	0	Bi-linear Z2
11030	-95	0	0	0	0	0	Bi-linear X2
11030	0	-197	0	0	0	0	Bi-linear Y2
11040	0	0	-25	0	0	0	Bi-linear Z2
11040	308	0	0	0	0	0	Bi-linear X2

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CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11040	0	2330	0	0	0	0	Bi-linear Y2
11041	0	0	-4	0	0	0	Bi-linear Z2
11041	82	0	0	0	0	0	Bi-linear X2
11041	0	518	0	0	0	0	Bi-linear Y2
11042	0	10	10	0	0	0	Bi-linear X2
11042	47	0	0	0	0	0	Bi-linear X2
11042	0	281	-281	0	0	0	Bi-linear X2
11100	0	-61	0	0	0	0	Bi-linear Y2
11100	0	0	-87	0	0	0	Bi-linear Z2
11100	67	0	0	0	0	0	Bi-linear X2
11110	0	-26	0	0	0	0	Bi-linear Y2
11110	0	0	-70	0	0	0	Bi-linear Z2
11110	13	0	0	0	0	0	Bi-linear X2
11200	105	0	0	0	0	0	Bi-linear X2
11200	0	672	0	0	0	0	Bi-linear Y2
11200	0	0	-139	0	0	0	Bi-linear Z2
11210	-31	0	0	0	0	0	Bi-linear X2
11210	0	1312	0	0	0	0	Bi-linear Y2
11210	0	0	-149	0	0	0	Bi-linear Z2
11211	-49	0	0	0	0	0	Bi-linear X2
11211	0	-425	0	0	0	0	Bi-linear Y2
11211	0	0	-76	0	0	0	Bi-linear Z2

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RESTRAINTS REPORT: Loads On Restraints
CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11212	11	0	0	0	0	0	Bi-linear X2
11212	0	-3837	0	0	0	0	Bi-linear Y2
11212	0	0	-79	0	0	0	Bi-linear Z2
11213	194	0	0	0	0	0	Bi-linear X2
11213	0	-6448	0	0	0	0	Bi-linear Y2
11213	0	0	-49	0	0	0	Bi-linear Z2
11214	55	0	0	0	0	0	Bi-linear X2
11214	0	-1022	1022	0	0	0	Bi-linear X2
11214	0	-71	-71	0	0	0	Bi-linear X2
12000	0	0	6	0	0	0	Bi-linear Z2
12000	0	-277	0	0	0	0	Bi-linear Y2
12000	0	-16	0	0	0	0	Bi-linear Y2
12000	-11	0	0	0	0	0	Bi-linear X2
12000	0	0	10	0	0	0	Bi-linear Z2
12000	-1	0	0	0	0	0	Bi-linear X2
12025	0	-3651	0	0	0	0	Rigid +Y
13000	0	-5	0	0	0	0	Bi-linear Y2
13000	-11	0	0	0	0	0	Bi-linear X2
13000	0	0	14	0	0	0	Bi-linear Z2
13000	-2	0	0	0	0	0	Bi-linear X2
13000	0	0	16	0	0	0	Bi-linear Z2
13000	0	-144	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
13025	0	-3611	0	0	0	0	Rigid +Y
14000	-2	0	0	0	0	0	Bi-linear X2
14000	0	0	-31	0	0	0	Bi-linear Z2
14000	0	-2120	0	0	0	0	Bi-linear Y2
15000	0	0	60	0	0	0	Bi-linear Z2
15000	13	0	0	0	0	0	Bi-linear X2
15000	0	0	232	0	0	0	Bi-linear Z2
15000	0	-4523	0	0	0	0	Bi-linear Y2
15000	0	-25	0	0	0	0	Bi-linear Y2
15000	96	0	0	0	0	0	Bi-linear X2
16000	0	0	77	0	0	0	Bi-linear Z2
16000	6	0	0	0	0	0	Bi-linear X2
16000	0	0	133	0	0	0	Bi-linear Z2
16000	0	-2696	0	0	0	0	Bi-linear Y2
16000	0	-34	0	0	0	0	Bi-linear Y2
16000	108	0	0	0	0	0	Bi-linear X2
17000	0	-25	0	0	0	0	Bi-linear Y2
17000	-12	0	0	0	0	0	Bi-linear X2
17000	0	0	-3	0	0	0	Bi-linear Z2
17000	-2	0	0	0	0	0	Bi-linear X2
17000	0	0	-4	0	0	0	Bi-linear Z2
17000	0	-757	0	0	0	0	Bi-linear Y2

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RESTRAINTS REPORT: Loads On Restraints
CASE 3 (SUS) W+P1

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
17025	0	-3669	0	0	0	0	Rigid +Y
18000	105	0	0	0	0	0	Bi-linear X2
18000	0	0	-1	0	0	0	Bi-linear Z2
18000	0	-15	0	0	0	0	Bi-linear Y2
18000	17	0	0	0	0	0	Bi-linear X2
18000	0	0	-7	0	0	0	Bi-linear Z2
18000	0	-3352	0	0	0	0	Bi-linear Y2
19000	0	-231	0	0	0	0	Bi-linear Y2
19000	0	-8	0	0	0	0	Bi-linear Y2
19000	-11	0	0	0	0	0	Bi-linear X2
19000	0	0	14	0	0	0	Bi-linear Z2
19000	-2	0	0	0	0	0	Bi-linear X2
19000	0	0	16	0	0	0	Bi-linear Z2
19025	0	-3598	0	0	0	0	Rigid +Y

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10	0	-73	0	0	0	0	Bi-linear Y2
10	1942	0	0	0	0	0	Bi-linear X2
10	0	0	-3567	0	0	0	Bi-linear Z2
75	0	81904	0	0	0	0	Rigid +Y
100	0	-54	0	0	0	0	Bi-linear Y2
100	3068	0	0	0	0	0	Bi-linear X2
100	0	0	-3559	0	0	0	Bi-linear Z2
101	0	-139	0	0	0	0	Bi-linear Y2
101	1742	0	0	0	0	0	Bi-linear X2
101	0	0	-14665	0	0	0	Bi-linear Z2
102	0	242	-242	0	0	0	Bi-linear X2
102	297	0	0	0	0	0	Bi-linear X2
102	0	-7617	-7617	0	0	0	Bi-linear X2
125	3159	0	0	0	0	0	Bi-linear X2
125	0	0	-3713	0	0	0	Bi-linear Z2
125	0	-31	0	0	0	0	Bi-linear Y2
150	3102	0	0	0	0	0	Bi-linear X2
150	0	0	-73	0	0	0	Bi-linear Z2
150	156	0	0	0	0	0	Bi-linear X2
150	0	0	-82	0	0	0	Bi-linear Z2
150	0	-1385	0	0	0	0	Bi-linear Y2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
150	238	0	0	0	0	0	Bi-linear X2
150	0	0	-125	0	0	0	Bi-linear Z2
150	0	-2112	0	0	0	0	Bi-linear Y2
150	0	-55	0	0	0	0	Bi-linear Y2
160	0	0	-724	0	0	0	Bi-linear Z2
160	0	-5520	0	0	0	0	Bi-linear Y2
160	845	0	0	0	0	0	Bi-linear X2
180	0	0	-3822	0	0	0	Bi-linear Z2
180	0	-3573	0	0	0	0	Bi-linear Y2
180	0	-24	0	0	0	0	Bi-linear Y2
180	4783	0	0	0	0	0	Bi-linear X2
180	0	0	-1089	0	0	0	Bi-linear Z2
180	43	0	0	0	0	0	Bi-linear X2
180	0	0	-218	0	0	0	Bi-linear Z2
180	0	-203	0	0	0	0	Bi-linear Y2
180	749	0	0	0	0	0	Bi-linear X2
183	3734	0	0	0	0	0	Bi-linear X2
183	0	0	-8041	0	0	0	Bi-linear Z2
183	0	10	0	0	0	0	Bi-linear Y2
190	0	0	-230	0	0	0	Bi-linear Z2
190	0	-199	0	0	0	0	Bi-linear Y2
190	43	0	0	0	0	0	Bi-linear X2
220	0	0	-956	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
220	0	-4259	0	0	0	0	Bi-linear Y2
220	429	0	0	0	0	0	Bi-linear X2
230	944	0	0	0	0	0	Bi-linear X2
230	0	0	-547	0	0	0	Bi-linear Z2
230	88	0	0	0	0	0	Bi-linear X2
230	0	0	-1144	0	0	0	Bi-linear Z2
230	0	-1616	0	0	0	0	Bi-linear Y2
230	133	0	0	0	0	0	Bi-linear X2
230	0	0	-1723	0	0	0	Bi-linear Z2
230	0	-2435	0	0	0	0	Bi-linear Y2
230	0	-18	0	0	0	0	Bi-linear Y2
232	821	0	0	0	0	0	Bi-linear X2
232	0	0	-7948	0	0	0	Bi-linear Z2
232	0	15	0	0	0	0	Bi-linear Y2
240	0	0	-2451	0	0	0	Bi-linear Z2
240	0	-3125	0	0	0	0	Bi-linear Y2
240	32	0	0	0	0	0	Bi-linear X2
250	-965	0	0	0	0	0	Bi-linear X2
250	0	0	-404	0	0	0	Bi-linear Z2
250	-90	0	0	0	0	0	Bi-linear X2
250	0	0	-844	0	0	0	Bi-linear Z2
250	0	-1311	0	0	0	0	Bi-linear Y2
250	-125	0	0	0	0	0	Bi-linear X2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
250	0	0	-1172	0	0	0	Bi-linear Z2
250	0	-1821	0	0	0	0	Bi-linear Y2
250	0	-14	0	0	0	0	Bi-linear Y2
253	-777	0	0	0	0	0	Bi-linear X2
253	0	0	-8136	0	0	0	Bi-linear Z2
253	0	19	0	0	0	0	Bi-linear Y2
260	0	0	-1552	0	0	0	Bi-linear Z2
260	0	-3150	0	0	0	0	Bi-linear Y2
260	-394	0	0	0	0	0	Bi-linear X2
270	-2878	0	0	0	0	0	Bi-linear X2
270	0	0	-327	0	0	0	Bi-linear Z2
270	-642	0	0	0	0	0	Bi-linear X2
270	0	0	-1632	0	0	0	Bi-linear Z2
270	0	-4438	0	0	0	0	Bi-linear Y2
270	-373	0	0	0	0	0	Bi-linear X2
270	0	0	-948	0	0	0	Bi-linear Z2
270	0	-2580	0	0	0	0	Bi-linear Y2
270	0	-21	0	0	0	0	Bi-linear Y2
273	-2406	0	0	0	0	0	Bi-linear X2
273	0	0	-8272	0	0	0	Bi-linear Z2
273	0	13	0	0	0	0	Bi-linear Y2
290	-4802	0	0	0	0	0	Bi-linear X2
290	0	0	-359	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
290	-43	0	0	0	0	0	Bi-linear X2
290	0	0	-72	0	0	0	Bi-linear Z2
290	0	-182	0	0	0	0	Bi-linear Y2
290	-1071	0	0	0	0	0	Bi-linear X2
290	0	0	-1794	0	0	0	Bi-linear Z2
290	0	-4549	0	0	0	0	Bi-linear Y2
290	0	-21	0	0	0	0	Bi-linear Y2
293	-3689	0	0	0	0	0	Bi-linear X2
293	0	0	-8280	0	0	0	Bi-linear Z2
293	0	12	0	0	0	0	Bi-linear Y2
300	0	0	-71	0	0	0	Bi-linear Z2
300	0	-175	0	0	0	0	Bi-linear Y2
300	-44	0	0	0	0	0	Bi-linear X2
346	0	-19	0	0	0	0	Bi-linear Y2
346	3214	0	0	0	0	0	Bi-linear X2
346	0	0	-1309	0	0	0	Bi-linear Z2
350	0	-37	0	0	0	0	Bi-linear Y2
350	3033	0	0	0	0	0	Bi-linear X2
350	0	0	221	0	0	0	Bi-linear Z2
350	366	0	0	0	0	0	Bi-linear X2
350	0	0	772	0	0	0	Bi-linear Z2
350	0	-3787	0	0	0	0	Bi-linear Y2
380	26	0	0	0	0	0	Bi-linear X2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
380	0	0	-101	0	0	0	Bi-linear Z2
380	0	-88	0	0	0	0	Bi-linear Y2
383	0	-3	0	0	0	0	Bi-linear Y2
383	3379	0	0	0	0	0	Bi-linear X2
383	0	0	-5618	0	0	0	Bi-linear Z2
410	46	0	0	0	0	0	Bi-linear X2
410	0	0	131	0	0	0	Bi-linear Z2
410	0	-480	0	0	0	0	Bi-linear Y2
420	0	-6	0	0	0	0	Bi-linear Y2
420	107	0	0	0	0	0	Bi-linear X2
420	0	0	-109	0	0	0	Bi-linear Z2
420	18	0	0	0	0	0	Bi-linear X2
420	0	0	-520	0	0	0	Bi-linear Z2
420	0	-1306	0	0	0	0	Bi-linear Y2
430	-156	0	0	0	0	0	Bi-linear X2
430	0	0	-484	0	0	0	Bi-linear Z2
430	0	-661	0	0	0	0	Bi-linear Y2
430	-76	0	0	0	0	0	Bi-linear X2
430	0	0	-236	0	0	0	Bi-linear Z2
430	0	-322	0	0	0	0	Bi-linear Y2
440	0	-6	0	0	0	0	Bi-linear Y2
440	-2138	0	0	0	0	0	Bi-linear X2
440	0	0	-182	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
440	-353	0	0	0	0	0	Bi-linear X2
440	0	0	-874	0	0	0	Bi-linear Z2
440	0	-1298	0	0	0	0	Bi-linear Y2
450	-405	0	0	0	0	0	Bi-linear X2
450	0	0	-328	0	0	0	Bi-linear Z2
450	0	-617	0	0	0	0	Bi-linear Y2
450	-197	0	0	0	0	0	Bi-linear X2
450	0	0	-160	0	0	0	Bi-linear Z2
450	0	-301	0	0	0	0	Bi-linear Y2
460	-975	0	0	0	0	0	Bi-linear X2
460	0	0	33	0	0	0	Bi-linear Z2
460	0	-568	0	0	0	0	Bi-linear Y2
470	-38	0	0	0	0	0	Bi-linear X2
470	0	0	16	0	0	0	Bi-linear Z2
470	0	-35	0	0	0	0	Bi-linear Y2
490	0	6	0	0	0	0	Bi-linear Y2
490	-6858	0	0	0	0	0	Bi-linear X2
490	0	0	-1588	0	0	0	Bi-linear Z2
565	0	-9417	0	0	0	0	Rigid +Y
600	3208	4027	13692	90	7750	168	Displ. Reaction
635	0	3654	0	0	0	0	Rigid +Y
680	0	0	12596	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
680	0	-36381	0	0	0	0	Bi-linear Y2
680	-1613	0	0	0	0	0	Bi-linear X2
680	0	0	2162	0	0	0	Bi-linear Z2
680	0	-6246	0	0	0	0	Bi-linear Y2
680	-9397	0	0	0	0	0	Bi-linear X2
690	0	0	5924	0	0	0	Bi-linear Z2
690	0	-11748	0	0	0	0	Bi-linear Y2
690	-3128	0	0	0	0	0	Bi-linear X2
691	0	0	7963	0	0	0	Bi-linear Z2
691	0	-12837	0	0	0	0	Bi-linear Y2
691	-3583	0	0	0	0	0	Bi-linear X2
692	0	0	9413	0	0	0	Bi-linear Z2
692	-18635	-18635	0	0	0	0	Bi-linear X2
692	-1000	1000	0	0	0	0	Bi-linear X2
700	-27448	0	0	0	0	0	Bi-linear X2
700	0	0	13858	0	0	0	Bi-linear Z2
700	0	-1096	0	0	0	0	Bi-linear Y2
705	-13314	0	0	0	0	0	Bi-linear X2
705	0	0	9453	0	0	0	Bi-linear Z2
705	0	-466	0	0	0	0	Bi-linear Y2
750	0	0	-3611	0	0	0	Bi-linear Z2
750	0	-17501	0	0	0	0	Bi-linear Y2
750	-4970	0	0	0	0	0	Bi-linear X2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
755	0	0	-874	0	0	0	Bi-linear Z2
755	0	-1858	0	0	0	0	Bi-linear Y2
755	-3034	0	0	0	0	0	Bi-linear X2
755	0	0	-5089	0	0	0	Bi-linear Z2
755	0	-10821	0	0	0	0	Bi-linear Y2
755	-521	0	0	0	0	0	Bi-linear X2
760	0	0	-6667	0	0	0	Bi-linear Z2
760	0	-1515	0	0	0	0	Bi-linear Y2
760	2126	0	0	0	0	0	Bi-linear X2
770	0	0	-940	0	0	0	Bi-linear Z2
770	0	-41	0	0	0	0	Bi-linear Y2
770	3325	0	0	0	0	0	Bi-linear X2
770	0	0	-5473	0	0	0	Bi-linear Z2
770	0	-240	0	0	0	0	Bi-linear Y2
770	571	0	0	0	0	0	Bi-linear X2
780	0	0	-3630	0	0	0	Bi-linear Z2
780	0	616	0	0	0	0	Bi-linear Y2
780	9224	0	0	0	0	0	Bi-linear X2
790	0	0	-455	0	0	0	Bi-linear Z2
790	0	88	0	0	0	0	Bi-linear Y2
790	5531	0	0	0	0	0	Bi-linear X2
790	0	0	-1512	0	0	0	Bi-linear Z2
790	0	291	0	0	0	0	Bi-linear Y2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
790	1663	0	0	0	0	0	Bi-linear X2
800	0	0	-2278	0	0	0	Bi-linear Z2
800	0	-58	0	0	0	0	Bi-linear Y2
800	17885	0	0	0	0	0	Bi-linear X2
810	0	0	-2307	0	0	0	Bi-linear Z2
810	0	-436	0	0	0	0	Bi-linear Y2
810	28783	0	0	0	0	0	Bi-linear X2
820	0	0	-3162	0	0	0	Bi-linear Z2
820	0	3371	0	0	0	0	Bi-linear Y2
820	17635	0	0	0	0	0	Bi-linear X2
830	0	0	-197	0	0	0	Bi-linear Z2
830	0	255	0	0	0	0	Bi-linear Y2
830	933	0	0	0	0	0	Bi-linear X2
832	30202	0	0	0	0	0	Bi-linear X2
832	0	0	-1867	0	0	0	Bi-linear Z2
832	0	165	0	0	0	0	Bi-linear Y2
885	0	4621	0	0	0	0	Rigid +Y
940	7227	8300	17289	2318	-12110	151	Displ. Reaction
965	0	-6958	0	0	0	0	Rigid +Y
1045	0	7	0	0	0	0	Bi-linear Y2
1045	-4402	0	0	0	0	0	Bi-linear X2
1045	0	0	-2853	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
1105	0	-3161	0	0	0	0	Rigid +Y
1225	0	-2494	0	0	0	0	Rigid +Y
1270	2963	6214	17468	781	2368	-557	Displ. Reaction
1295	0	5	0	0	0	0	Bi-linear Y2
1295	-140	0	0	0	0	0	Bi-linear X2
1295	0	0	-3143	0	0	0	Bi-linear Z2
1355	0	-4998	0	0	0	0	Rigid +Y
1425	0	1557	0	0	0	0	Rigid +Y
1470	4183	6350	14419	1623	-5120	-516	Displ. Reaction
1550	108	0	14804	319	-789	497	Displ. Reaction
1650	28	-33	14516	247	-195	69	Displ. Reaction
1750	-23	4	12088	382	169	-85	Displ. Reaction
1850	-93	-538	11637	-1101	603	-296	Displ. Reaction
1925	0	-220	0	0	0	0	Rigid +Y
1980	3880	6116	15701	893	-1852	-531	Displ. Reaction
1990	0	0	-3704	0	0	0	Bi-linear Z2
1990	0	5	0	0	0	0	Bi-linear Y2
1990	-2301	0	0	0	0	0	Bi-linear X2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
2060	0	-3367	0	0	0	0	Rigid +Y
2150	-67	-89	10667	27	636	-500	Displ. Reaction
2205	0	1439	0	0	0	0	Rigid +Y
2220	0	-1067	0	0	0	0	Rigid +Y
2240	0	0	0	0	0	0	Rigid Z w/gap
2240	0	-327	0	0	0	0	Rigid +Y
2300	0	1288	0	0	0	0	Rigid +Y
2310	0	0	-3403	0	0	0	Rigid Z w/gap
2310	0	1427	0	0	0	0	Rigid +Y
2560	-1745	-585	821	128	-321	-53	Displ. Reaction
3120	-1587	-1376	823	615	-981	-67	Displ. Reaction
3320	-1489	-839	776	372	-1018	-84	Displ. Reaction
4005	0	96961	0	0	0	0	Rigid +Y
4010	0	29350	0	0	0	0	Rigid +Y
4020	0	10157	0	0	0	0	Rigid +Y
4030	-34392	0	0	0	0	0	Rigid X w/gap
4030	0	-8686	0	0	0	0	Rigid +Y
4040	0	2162	0	0	0	0	Rigid +Y

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
4050	0	-875	0	0	0	0	Rigid +Y
4050	7929	0	0	0	0	0	Rigid X w/gap
4050	0	0	-79280	0	0	0	Rigid Z w/gap
4120	0	12817	0	0	0	0	Rigid +Y
4120	-68483	0	0	0	0	0	Rigid X w/gap
4130	0	-25731	0	0	0	0	Rigid +Y
4230	-7732	0	0	0	0	0	Bi-linear X2
4230	0	0	-151	0	0	0	Bi-linear Z2
4230	0	-7	0	0	0	0	Bi-linear Y2
4300	0	114	0	0	0	0	Bi-linear Y2
4300	3924	0	0	0	0	0	Bi-linear X2
4300	0	0	-1277	0	0	0	Bi-linear Z2
4400	0	0	-1371	0	0	0	Bi-linear Z2
4400	0	127	0	0	0	0	Bi-linear Y2
4400	15077	0	0	0	0	0	Bi-linear X2
5560	0	-7996	0	0	0	0	Rigid +Y
5605	0	1894	0	0	0	0	Rigid +Y
5620	-4327	4021	1260	11256	9483	-11770	Displ. Reaction
6100	0	-0	0	0	0	0	Rigid +Y
6110	0	0	164	0	0	0	Rigid Z w/gap

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
6110	0	0	0	0	0	0	Rigid +Y
6120	0	-0	0	0	0	0	Rigid +Y
6130	0	0	0	0	0	0	Rigid Z w/gap
6130	0	0	0	0	0	0	Rigid +Y
7000	0	2302	0	0	0	0	Rigid +Y
7010	0	-3196	0	0	0	0	Rigid +Y
7040	0	135	0	0	0	0	Rigid +Y
7060	0	1652	0	0	0	0	Rigid +Y
7080	0	-395	0	0	0	0	Rigid +Y
7100	0	64	0	0	0	0	Rigid +Y
7100	0	0	-795	0	0	0	Rigid Z w/gap
7210	0	33944	0	0	0	0	Rigid +Y
7220	0	-22378	0	0	0	0	Rigid +Y
7230	0	1327	0	0	0	0	Rigid +Y
7280	0	476	0	0	0	0	Rigid +Y
7300	0	2	0	0	0	0	Rigid +Y
7320	0	-0	0	0	0	0	Rigid +Y
7330	-5066	0	0	0	0	0	Rigid X w/gap
7330	0	0	0	0	0	0	Rigid +Y
7330	0	0	38545	0	0	0	Rigid Z w/gap

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7340	0	0	0	0	0	0	Rigid +Y
7350	0	-1	0	0	0	0	Rigid +Y
7350	19380	0	0	0	0	0	Rigid X w/gap
7370	0	3	0	0	0	0	Rigid +Y
7380	0	-13	0	0	0	0	Rigid +Y
7400	0	28	0	0	0	0	Rigid +Y
7400	-12343	0	0	0	0	0	Rigid X w/gap
7415	0	-19	0	0	0	0	Rigid +Y
7445	0	2	0	0	0	0	Rigid +Y
7460	0	-0	0	0	0	0	Rigid +Y
7460	-20182	0	0	0	0	0	Rigid X w/gap
7480	0	-0	0	0	0	0	Rigid +Y
7480	0	0	-71010	0	0	0	Rigid Z w/gap
7490	0	0	0	0	0	0	Rigid +Y
7490	18984	0	0	0	0	0	Rigid X w/gap
7615	0	-1244	0	0	0	0	Rigid +Y
7660	0	1217	0	0	0	0	Rigid +Y
7670	0	-266	0	0	0	0	Rigid +Y
7690	0	-16	0	0	0	0	Rigid +Y
7720	0	3	0	0	0	0	Rigid +Y

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
7740	0	10	0	0	0	0	Rigid +Y
7750	-8743	0	0	0	0	0	Rigid X w/gap
7750	0	-6	0	0	0	0	Rigid +Y
7760	0	2	0	0	0	0	Rigid +Y
7790	0	-0	0	0	0	0	Rigid +Y
7800	0	0	0	0	0	0	Rigid +Y
7810	9041	0	0	0	0	0	Rigid X w/gap
7810	0	-0	0	0	0	0	Rigid +Y
7810	0	0	41053	0	0	0	Rigid Z w/gap
7820	0	0	0	0	0	0	Rigid +Y
7830	-2615	0	0	0	0	0	Rigid X w/gap
7830	0	-0	0	0	0	0	Rigid +Y
7840	0	0	0	0	0	0	Rigid +Y
7870	0	0	0	0	0	0	Rigid X w/gap
7870	0	0	0	0	0	0	Rigid +Y
7880	0	0	0	0	0	0	Rigid +Y
8020	0	6065	0	0	0	0	Rigid +Y
8020	-244	0	0	0	0	0	Rigid X w/gap
8120	0	8122	0	0	0	0	Rigid +Y

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
8120	0	0	0	0	0	0	Rigid X w/gap
8220	0	0	0	0	0	0	Rigid X w/gap
8220	0	5943	0	0	0	0	Rigid +Y
8320	0	6431	0	0	0	0	Rigid +Y
8320	0	0	0	0	0	0	Rigid X w/gap
8420	234	0	0	0	0	0	Rigid X w/gap
8420	0	6092	0	0	0	0	Rigid +Y
9100	0	-12378	0	0	0	0	Bi-linear Y2
9100	0	0	-2016	0	0	0	Bi-linear Z2
9100	-166	0	0	0	0	0	Bi-linear X2
9101	0	-16220	0	0	0	0	Bi-linear Y2
9101	0	0	-3347	0	0	0	Bi-linear Z2
9101	-154	0	0	0	0	0	Bi-linear X2
9110	0	0	15325	0	0	0	Bi-linear Z2
9110	0	34	0	0	0	0	Bi-linear Y2
9110	224	0	0	0	0	0	Bi-linear X2
9120	0	0	4033	0	0	0	Bi-linear Z2
9120	0	61	0	0	0	0	Bi-linear Y2
9120	382	0	0	0	0	0	Bi-linear X2
9150	0	40423	0	0	0	0	Rigid +Y

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
9250	0	-4043	0	0	0	0	Rigid +Y
9300	0	1379	0	0	0	0	Rigid +Y
9335	0	63	0	0	0	0	Rigid +Y
9370	0	0	0	0	0	0	Rigid X w/gap
9370	0	-312	0	0	0	0	Rigid +Y
9622	0	315	0	0	0	0	Rigid +Y
9660	0	1256	0	0	0	0	Rigid +Y
9690	0	-5510	0	0	0	0	Rigid +Y
9900	0	16684	0	0	0	0	Rigid +Y
9960	0	0	7885	0	0	0	Bi-linear Z2
9960	0	-52	0	0	0	0	Bi-linear Y2
9960	-26	0	0	0	0	0	Bi-linear X2
9961	0	0	12888	0	0	0	Bi-linear Z2
9961	0	-122	0	0	0	0	Bi-linear Y2
9961	-40	0	0	0	0	0	Bi-linear X2
9962	0	4077	4077	0	0	0	Bi-linear X2
9962	0	-372	372	0	0	0	Bi-linear X2
9962	-25	0	0	0	0	0	Bi-linear X2
10010	0	-10485	0	0	0	0	Bi-linear Y2
10010	0	0	1846	0	0	0	Bi-linear Z2
10010	-40	0	0	0	0	0	Bi-linear X2
10011	0	-8209	0	0	0	0	Bi-linear Y2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10011	0	0	3112	0	0	0	Bi-linear Z2
10011	21	0	0	0	0	0	Bi-linear X2
10012	0	-2729	0	0	0	0	Bi-linear Y2
10012	0	0	2855	0	0	0	Bi-linear Z2
10012	22	0	0	0	0	0	Bi-linear X2
10020	0	43	0	0	0	0	Bi-linear Y2
10020	0	0	411	0	0	0	Bi-linear Z2
10020	-0	0	0	0	0	0	Bi-linear X2
10030	0	25	0	0	0	0	Bi-linear Y2
10030	0	0	320	0	0	0	Bi-linear Z2
10030	-0	0	0	0	0	0	Bi-linear X2
10100	1130	0	0	0	0	0	Bi-linear X2
10100	0	0	759	0	0	0	Bi-linear Z2
10100	0	-163	0	0	0	0	Bi-linear Y2
10110	570	0	0	0	0	0	Bi-linear X2
10110	0	-7252	0	0	0	0	Bi-linear Y2
10110	0	0	-2203	0	0	0	Bi-linear Z2
10111	249	0	0	0	0	0	Bi-linear X2
10111	0	-6345	0	0	0	0	Bi-linear Y2
10111	0	0	-2793	0	0	0	Bi-linear Z2
10112	24	0	0	0	0	0	Bi-linear X2
10112	0	-2089	0	0	0	0	Bi-linear Y2
10112	0	0	-2096	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
10120	-768	0	0	0	0	0	Bi-linear X2
10120	0	0	-9910	0	0	0	Bi-linear Z2
10120	0	-43	0	0	0	0	Bi-linear Y2
10121	-65	0	0	0	0	0	Bi-linear X2
10121	0	0	-18478	0	0	0	Bi-linear Z2
10121	0	-133	0	0	0	0	Bi-linear Y2
10122	144	0	0	0	0	0	Bi-linear X2
10122	0	-6811	-6811	0	0	0	Bi-linear X2
10122	0	290	-290	0	0	0	Bi-linear X2
10135	0	31185	0	0	0	0	Rigid +Y
10140	0	-11586	0	0	0	0	Rigid +Y
10160	0	2866	0	0	0	0	Rigid +Y
10180	0	-670	0	0	0	0	Rigid +Y
10200	0	0	0	0	0	0	Rigid Z w/gap
10200	0	107	0	0	0	0	Rigid +Y
11000	0	0	-4198	0	0	0	Bi-linear Z2
11000	-8	0	0	0	0	0	Bi-linear X2
11000	0	-3890	0	0	0	0	Bi-linear Y2
11010	0	0	-1936	0	0	0	Bi-linear Z2
11010	18	0	0	0	0	0	Bi-linear X2
11010	0	1707	0	0	0	0	Bi-linear Y2
11020	0	0	1646	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11020	24	0	0	0	0	0	Bi-linear X2
11020	0	1415	0	0	0	0	Bi-linear Y2
11030	0	0	5232	0	0	0	Bi-linear Z2
11030	-79	0	0	0	0	0	Bi-linear X2
11030	0	-6446	0	0	0	0	Bi-linear Y2
11040	0	0	4908	0	0	0	Bi-linear Z2
11040	-435	0	0	0	0	0	Bi-linear X2
11040	0	-19030	0	0	0	0	Bi-linear Y2
11041	0	0	860	0	0	0	Bi-linear Z2
11041	-73	0	0	0	0	0	Bi-linear X2
11041	0	-2617	0	0	0	0	Bi-linear Y2
11042	0	314	314	0	0	0	Bi-linear X2
11042	14	0	0	0	0	0	Bi-linear X2
11042	0	-6797	6797	0	0	0	Bi-linear X2
11100	0	-303	0	0	0	0	Bi-linear Y2
11100	0	0	7449	0	0	0	Bi-linear Z2
11100	34	0	0	0	0	0	Bi-linear X2
11110	0	883	0	0	0	0	Bi-linear Y2
11110	0	0	7933	0	0	0	Bi-linear Z2
11110	-2	0	0	0	0	0	Bi-linear X2
11200	-97	0	0	0	0	0	Bi-linear X2
11200	0	623	0	0	0	0	Bi-linear Y2
11200	0	0	-4150	0	0	0	Bi-linear Z2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
11210	-101	0	0	0	0	0	Bi-linear X2
11210	0	1067	0	0	0	0	Bi-linear Y2
11210	0	0	-1665	0	0	0	Bi-linear Z2
11211	-145	0	0	0	0	0	Bi-linear X2
11211	0	-3784	0	0	0	0	Bi-linear Y2
11211	0	0	-378	0	0	0	Bi-linear Z2
11212	-268	0	0	0	0	0	Bi-linear X2
11212	0	-11493	0	0	0	0	Bi-linear Y2
11212	0	0	96	0	0	0	Bi-linear Z2
11213	-79	0	0	0	0	0	Bi-linear X2
11213	0	-10787	0	0	0	0	Bi-linear Y2
11213	0	0	376	0	0	0	Bi-linear Z2
11214	208	0	0	0	0	0	Bi-linear X2
11214	0	-2347	2347	0	0	0	Bi-linear X2
11214	0	-23	-23	0	0	0	Bi-linear X2
12000	0	0	-611	0	0	0	Bi-linear Z2
12000	0	748	0	0	0	0	Bi-linear Y2
12000	0	42	0	0	0	0	Bi-linear Y2
12000	30267	0	0	0	0	0	Bi-linear X2
12000	0	0	-921	0	0	0	Bi-linear Z2
12000	3030	0	0	0	0	0	Bi-linear X2
12025	0	-744	0	0	0	0	Rigid +Y
13000	0	5	0	0	0	0	Bi-linear Y2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
13000	18404	0	0	0	0	0	Bi-linear X2
13000	0	0	-760	0	0	0	Bi-linear Z2
13000	2542	0	0	0	0	0	Bi-linear X2
13000	0	0	-866	0	0	0	Bi-linear Z2
13000	0	158	0	0	0	0	Bi-linear Y2
13025	0	-500	0	0	0	0	Rigid +Y
14000	-2946	0	0	0	0	0	Bi-linear X2
14000	0	0	4923	0	0	0	Bi-linear Z2
14000	0	-11265	0	0	0	0	Bi-linear Y2
15000	0	0	-611	0	0	0	Bi-linear Z2
15000	617	0	0	0	0	0	Bi-linear X2
15000	0	0	-2368	0	0	0	Bi-linear Z2
15000	0	-2490	0	0	0	0	Bi-linear Y2
15000	0	-14	0	0	0	0	Bi-linear Y2
15000	4616	0	0	0	0	0	Bi-linear X2
16000	0	0	91	0	0	0	Bi-linear Z2
16000	-397	0	0	0	0	0	Bi-linear X2
16000	0	0	157	0	0	0	Bi-linear Z2
16000	0	-357	0	0	0	0	Bi-linear Y2
16000	0	-4	0	0	0	0	Bi-linear Y2
16000	-6655	0	0	0	0	0	Bi-linear X2
17000	0	-129	0	0	0	0	Bi-linear Y2
17000	-8082	0	0	0	0	0	Bi-linear X2

RESTRAINTS REPORT: Loads On Restraints
CASE 4 (EXP) L4=L2-L3

NODE	FX N.	FY N.	FZ N.	MX N.m.	MY N.m.	MZ N.m.	
17000	0	0	-1037	0	0	0	Bi-linear Z2
17000	-1116	0	0	0	0	0	Bi-linear X2
17000	0	0	-1182	0	0	0	Bi-linear Z2
17000	0	-3909	0	0	0	0	Bi-linear Y2
17025	0	-278	0	0	0	0	Rigid +Y
18000	-4388	0	0	0	0	0	Bi-linear X2
18000	0	0	-95	0	0	0	Bi-linear Z2
18000	0	-4	0	0	0	0	Bi-linear Y2
18000	-724	0	0	0	0	0	Bi-linear X2
18000	0	0	-454	0	0	0	Bi-linear Z2
18000	0	-882	0	0	0	0	Bi-linear Y2
19000	0	-241	0	0	0	0	Bi-linear Y2
19000	0	-8	0	0	0	0	Bi-linear Y2
19000	5158	0	0	0	0	0	Bi-linear X2
19000	0	0	-1462	0	0	0	Bi-linear Z2
19000	712	0	0	0	0	0	Bi-linear X2
19000	0	0	-1666	0	0	0	Bi-linear Z2
19025	0	54	0	0	0	0	Rigid +Y

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

Piping Code: Multiple Codes

B31.8 = B31.8 -2003, February 6, 2004

B31.3 = B31.3 -2006, May 31, 2007

CODE STRESS CHECK PASSED : LOADCASE 1 (HYD) WW+HP

Highest Stresses: (KPa)

CodeStress Ratio (%): 56.2 @Node 290

Code Stress: 103208.4 Allowable: 183754.2

Axial Stress: 154807.9 @Node 75

Bending Stress: 58271.2 @Node 80

Torsion Stress: 1916.3 @Node 2555

Hoop Stress: 309602.8 @Node 75

3D Max Intensity: 315524.1 @Node 75

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10210	0.0	0.0	1.000	1.000	126494.9	363758.3	34.8	B31.8	
10200	30.5	0.0	1.000	1.000	126525.4	363758.3	34.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10200	30.5	0.0	1.000	1.000	126525.4	363758.3	34.8	B31.8	
10190	3258.3	0.0	1.000	1.000	129753.1	363758.3	35.7	B31.8	
10190	3258.3	0.0	1.000	1.000	129753.1	363758.3	35.7	B31.8	
10180	4837.6	0.0	1.000	1.000	131332.4	363758.3	36.1	B31.8	
10180	4837.6	0.0	1.000	1.000	131332.4	363758.3	36.1	B31.8	
10170	221.2	0.0	1.000	1.000	126716.1	363758.3	34.8	B31.8	
10170	221.2	0.0	1.000	1.000	126716.1	363758.3	34.8	B31.8	
10160	4334.5	0.0	1.000	1.000	130829.3	363758.3	36.0	B31.8	
10160	4334.5	0.0	1.000	1.000	130829.3	363758.3	36.0	B31.8	
10150	819.9	0.0	1.000	1.000	127314.8	363758.3	35.0	B31.8	
10150	819.9	0.0	1.000	1.000	127314.8	363758.3	35.0	B31.8	
10140	1679.2	0.0	1.000	1.000	128174.1	363758.3	35.2	B31.8	
10140	1679.2	0.0	1.000	1.000	128174.1	363758.3	35.2	B31.8	
10135	13538.7	0.0	1.000	1.000	140033.6	363758.3	38.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10135	13538.7	0.0	1.000	1.000	140033.6	363758.3	38.5	B31.8	
10130	1587.2	0.0	2.180	2.573	128082.1	363758.3	35.2	B31.8	
10130	249.7	0.0	2.180	2.573	126744.6	363758.3	34.8	B31.8	
10300	0.0	0.0	1.000	1.000	126494.9	363758.3	34.8	B31.8	
10130	1836.9	0.0	2.180	2.573	128947.8	363758.3	35.4	B31.8	
10260	1123.5	0.0	1.000	1.000	127615.3	363758.3	35.1	B31.8	
10260	1123.5	0.0	1.000	1.000	127615.3	363758.3	35.1	B31.8	
10250	1123.5	0.0	1.000	1.000	127384.1	363758.3	35.0	B31.8	
10250	1123.5	0.0	1.000	1.000	127384.1	363758.3	35.0	B31.8	
10120	1123.5	0.0	1.000	1.000	127366.3	363758.3	35.0	B31.8	
10120	1123.5	0.0	1.000	1.000	127369.1	363758.3	35.0	B31.8	
10121	792.1	0.0	1.000	1.000	127037.7	363758.3	34.9	B31.8	
10121	1122.8	0.0	2.190	1.825	127372.3	363758.3	35.0	B31.8	
10122	655.5	0.0	2.190	1.825	126942.6	363758.3	34.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10122	655.5	0.0	2.190	1.825	126943.9	363758.3	34.9	B31.8	
10110	1390.8	0.0	2.190	1.825	127815.4	363758.3	35.1	B31.8	
10110	801.0	0.0	1.000	1.000	127224.6	363758.3	35.0	B31.8	
10111	3915.7	0.0	1.000	1.000	130339.3	363758.3	35.8	B31.8	
10111	3915.7	0.0	1.000	1.000	130337.7	363758.3	35.8	B31.8	
10112	4792.9	0.0	1.000	1.000	131214.9	363758.3	36.1	B31.8	
10112	4792.9	0.0	1.000	1.000	131213.6	363758.3	36.1	B31.8	
11200	3524.9	0.0	1.000	1.000	129945.6	363758.3	35.7	B31.8	
11200	3524.9	0.0	1.000	1.000	129942.5	363758.3	35.7	B31.8	
11210	3748.1	0.0	1.000	1.000	130165.7	363758.3	35.8	B31.8	
11210	3748.1	0.0	1.000	1.000	130162.3	363758.3	35.8	B31.8	
11211	5205.2	0.0	1.000	1.000	131619.4	363758.3	36.2	B31.8	
11211	5205.2	0.0	1.000	1.000	131617.7	363758.3	36.2	B31.8	
11212	4195.2	0.0	1.000	1.000	130607.7	363758.3	35.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11212	4195.2	0.0	1.000	1.000	130605.8	363758.3	35.9	B31.8	
11213	197.6	0.0	1.000	1.000	126608.2	363758.3	34.8	B31.8	
11213	562.9	0.0	2.190	1.825	126972.3	363758.3	34.9	B31.8	
11214	2307.0	0.0	2.190	1.825	128492.0	363758.3	35.3	B31.8	
11214	2307.0	0.0	2.190	1.825	128489.0	363758.3	35.3	B31.8	
10100	3089.5	0.0	2.190	1.825	129196.5	363758.3	35.5	B31.8	
10100	1895.5	0.0	1.000	1.000	127996.4	363758.3	35.2	B31.8	
9	1712.8	0.0	1.000	1.000	127813.7	363758.3	35.1	B31.8	
9	1712.8	0.0	1.000	1.000	127813.7	363758.3	35.1	B31.8	
10	1396.0	0.0	1.000	1.000	127496.9	363758.3	35.0	B31.8	
10	1396.0	0.0	1.000	1.000	127492.8	363758.3	35.0	B31.8	
18	1392.3	0.0	1.000	1.000	127491.4	363758.3	35.0	B31.8	
18	2258.6	0.0	2.190	1.825	128357.7	363758.3	35.3	B31.8	
19	2706.5	0.0	2.190	1.825	128997.8	363758.3	35.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19	2706.5	0.0	2.190	1.825	128997.8	363758.3	35.5	B31.8	
20	3651.9	0.0	2.190	1.825	130095.0	363758.3	35.8	B31.8	
20	2213.8	0.0	1.000	1.000	128656.8	363758.3	35.4	B31.8	
30	4444.6	0.0	2.180	2.573	130887.7	363758.3	36.0	B31.8	
30	11750.2	0.0	2.180	2.573	114940.4	311257.1	36.9	B31.8	
119	2884.8	0.0	2.192	1.826	105580.7	311257.1	33.9	B31.8	
119	2884.8	0.0	2.192	1.826	105580.7	311257.1	33.9	B31.8	
120	4321.1	0.0	2.192	1.826	106723.8	311257.1	34.3	B31.8	
120	2753.2	0.0	1.000	1.000	105155.9	311257.1	33.8	B31.8	
125	2737.8	0.0	1.000	1.000	105136.7	311257.1	33.8	B31.8	
125	2737.8	0.0	1.000	1.000	105140.1	311257.1	33.8	B31.8	
149	2222.2	0.0	1.000	1.000	104624.4	311257.1	33.6	B31.8	
149	2222.2	0.0	1.000	1.000	104624.4	311257.1	33.6	B31.8	
150	2881.3	0.0	1.929	2.239	105283.5	311257.1	33.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
150	10888.4	0.0	1.929	2.239	114109.6	311257.1	36.7	B31.8	
220	1796.7	0.0	1.000	1.000	105017.9	311257.1	33.7	B31.8	
220	1796.7	0.0	1.000	1.000	105017.7	311257.1	33.7	B31.8	
229	142.1	0.0	1.000	1.000	103363.0	311257.1	33.2	B31.8	
229	142.1	0.0	1.000	1.000	103363.0	311257.1	33.2	B31.8	
230	5985.4	0.0	4.759	6.011	109206.4	311257.1	35.1	B31.8	
230	5520.9	0.0	4.759	6.011	62837.8	363750.0	17.3	B31.8	
231	727.9	0.0	1.000	1.000	58044.8	363750.0	16.0	B31.8	
231	727.9	0.0	1.000	1.000	58044.8	363750.0	16.0	B31.8	
232	731.2	0.0	1.000	1.000	58048.1	363750.0	16.0	B31.8	
232	731.2	0.0	1.000	1.000	58046.7	363750.0	16.0	B31.8	
1598	1340.8	0.0	1.000	1.000	58734.7	363750.0	16.1	B31.8	
1598	1847.6	0.0	1.840	1.533	59241.5	363750.0	16.3	B31.8	
1599	1936.1	0.0	1.840	1.533	59366.3	363750.0	16.3	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1599	1936.1	0.0	1.840	1.533	59366.3	363750.0	16.3	B31.8	
1600	1440.9	0.0	1.840	1.533	58823.5	363750.0	16.2	B31.8	
1600	1040.4	0.0	1.000	1.000	58422.9	363750.0	16.1	B31.8	
8300	1185.6	0.0	1.000	1.000	58568.2	363750.0	16.1	B31.8	
8300	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	9447.1	0.0	1.000	1.000	66829.7	363750.0	18.4	B31.8	
8320	14286.4	0.0	1.000	1.000	71669.0	363750.0	19.7	B31.8	
8320	14286.4	0.0	1.000	1.000	71669.0	363750.0	19.7	B31.8	
1610	6482.1	0.0	1.000	1.000	63864.6	363750.0	17.6	B31.8	
1610	6482.1	0.0	1.000	1.000	63864.6	363750.0	17.6	B31.8	
1650	14168.6	0.0	1.000	1.000	71551.1	363750.0	19.7	B31.8	
230	5364.7	0.0	4.759	6.011	108573.5	311257.1	34.9	B31.8	
240	1257.7	0.0	1.000	1.000	104466.4	311257.1	33.6	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
240	1257.7	0.0	1.000	1.000	104466.1	311257.1	33.6	B31.8	
249	659.3	0.0	1.000	1.000	103867.8	311257.1	33.4	B31.8	
249	659.3	0.0	1.000	1.000	103867.8	311257.1	33.4	B31.8	
250	328.6	0.0	4.759	6.011	103537.0	311257.1	33.3	B31.8	
250	1411.6	0.0	4.759	6.011	58657.1	363750.0	16.1	B31.8	
252	155.8	0.0	1.000	1.000	57401.4	363750.0	15.8	B31.8	
252	155.8	0.0	1.000	1.000	57401.4	363750.0	15.8	B31.8	
253	26.1	0.0	1.000	1.000	57271.6	363750.0	15.7	B31.8	
253	26.1	0.0	1.000	1.000	57271.6	363750.0	15.7	B31.8	
1698	140.8	0.0	1.000	1.000	57464.8	363750.0	15.8	B31.8	
1698	194.6	0.0	1.840	1.533	57518.5	363750.0	15.8	B31.8	
1699	229.3	0.0	1.840	1.533	57583.1	363750.0	15.8	B31.8	
1699	229.3	0.0	1.840	1.533	57583.1	363750.0	15.8	B31.8	
1700	60.3	0.0	1.840	1.533	57404.8	363750.0	15.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1700	44.1	0.0	1.000	1.000	57388.5	363750.0	15.8	B31.8	
8200	1191.4	0.0	1.000	1.000	58535.9	363750.0	16.1	B31.8	
8200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	8115.8	0.0	1.000	1.000	65460.3	363750.0	18.0	B31.8	
8220	12461.6	0.0	1.000	1.000	69806.1	363750.0	19.2	B31.8	
8220	12461.6	0.0	1.000	1.000	69806.1	363750.0	19.2	B31.8	
1710	7167.2	0.0	1.000	1.000	64511.7	363750.0	17.7	B31.8	
1710	7167.2	0.0	1.000	1.000	64511.7	363750.0	17.7	B31.8	
1750	15076.3	0.0	1.000	1.000	72420.7	363750.0	19.9	B31.8	
250	286.8	0.0	4.759	6.011	103492.0	311257.1	33.2	B31.8	
260	30.5	0.0	1.000	1.000	103235.7	311257.1	33.2	B31.8	
260	30.5	0.0	1.000	1.000	103235.4	311257.1	33.2	B31.8	
269	133.3	0.0	1.000	1.000	103338.2	311257.1	33.2	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
269	133.3	0.0	1.000	1.000	103338.2	311257.1	33.2	B31.8	
270	922.2	0.0	4.759	6.011	104127.1	311257.1	33.5	B31.8	
270	1141.6	0.0	4.759	6.011	58559.7	363750.0	16.1	B31.8	
272	44.4	0.0	1.000	1.000	57462.4	363750.0	15.8	B31.8	
272	44.4	0.0	1.000	1.000	57462.4	363750.0	15.8	B31.8	
273	309.3	0.0	1.000	1.000	57727.4	363750.0	15.9	B31.8	
273	309.3	0.0	1.000	1.000	57727.5	363750.0	15.9	B31.8	
1798	543.1	0.0	1.000	1.000	58039.7	363750.0	16.0	B31.8	
1798	749.4	0.0	1.840	1.533	58245.9	363750.0	16.0	B31.8	
1799	408.6	0.0	1.840	1.533	57890.8	363750.0	15.9	B31.8	
1799	408.6	0.0	1.840	1.533	57890.8	363750.0	15.9	B31.8	
1800	776.6	0.0	1.840	1.533	58130.1	363750.0	16.0	B31.8	
1800	562.8	0.0	1.000	1.000	57916.3	363750.0	15.9	B31.8	
8100	4239.4	0.0	1.000	1.000	61592.8	363750.0	16.9	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8100	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	7264.6	0.0	1.000	1.000	62746.1	363750.0	17.2	B31.8	
8120	10101.8	0.0	1.000	1.000	65583.3	363750.0	18.0	B31.8	
8120	10101.8	0.0	1.000	1.000	65583.3	363750.0	18.0	B31.8	
1810	3938.3	0.0	1.000	1.000	59419.8	363750.0	16.3	B31.8	
1810	7840.9	0.0	1.000	1.000	65194.4	363750.0	17.9	B31.8	
1850	14802.1	0.0	1.000	1.000	72155.5	363750.0	19.8	B31.8	
270	884.3	0.0	4.759	6.011	104086.6	311257.1	33.4	B31.8	
289	118.2	0.0	1.000	1.000	103320.5	311257.1	33.2	B31.8	
289	118.2	0.0	1.000	1.000	103320.5	311257.1	33.2	B31.8	
290	40.2	0.0	4.759	6.011	103242.5	311257.1	33.2	B31.8	
290	422.6	0.0	4.759	6.011	57682.8	183754.2	31.4	B31.8	
292	99.3	0.0	1.000	1.000	57359.5	183754.2	31.2	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
292	99.3	0.0	1.000	1.000	57359.5	183754.2	31.2	B31.8	
293	254.3	0.0	1.000	1.000	57514.5	183754.2	31.3	B31.8	
293	254.3	0.0	1.000	1.000	57514.2	183754.2	31.3	B31.8	
2098	403.7	0.0	1.000	1.000	57741.9	183754.2	31.4	B31.8	
2098	556.5	0.0	1.840	1.533	57894.8	183754.2	31.5	B31.8	
2099	571.4	0.0	1.840	1.533	57937.2	183754.2	31.5	B31.8	
2099	571.4	0.0	1.840	1.533	57937.2	183754.2	31.5	B31.8	
2100	322.3	0.0	1.840	1.533	57669.4	183754.2	31.4	B31.8	
2100	232.8	0.0	1.000	1.000	57579.9	363750.0	15.8	B31.8	
8000	1205.0	0.0	1.000	1.000	58552.2	363750.0	16.1	B31.8	
8000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	8404.1	0.0	1.000	1.000	65751.3	363750.0	18.1	B31.8	
8020	12851.3	0.0	1.000	1.000	70198.5	363750.0	19.3	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8020	12851.3	0.0	1.000	1.000	70198.5	363750.0	19.3	B31.8	
2110	7020.8	0.0	1.000	1.000	64367.9	363750.0	17.7	B31.8	
2110	7020.8	0.0	1.000	1.000	64367.9	363750.0	17.7	B31.8	
2150	14882.1	0.0	1.000	1.000	72229.2	363750.0	19.9	B31.8	
290	7.4	0.0	4.759	6.011	103208.4	183754.2	56.2	B31.8	
299	1.0	0.0	1.000	1.000	103202.0	183754.2	56.2	B31.8	
299	1.0	0.0	1.000	1.000	103202.0	183754.2	56.2	B31.8	
300	0.0	0.0	1.000	1.000	103201.0	183754.2	56.2	B31.8	
150	8032.0	0.0	1.929	2.239	111239.7	311257.1	35.7	B31.8	
160	502.9	0.0	1.000	1.000	103710.5	311257.1	33.3	B31.8	
160	502.9	0.0	1.000	1.000	103710.9	311257.1	33.3	B31.8	
179	318.9	0.0	1.000	1.000	103526.9	311257.1	33.3	B31.8	
179	318.9	0.0	1.000	1.000	103526.9	311257.1	33.3	B31.8	
180	550.0	0.0	4.759	6.011	103758.0	311257.1	33.3	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
180	5574.7	0.0	4.759	6.011	62839.5	363750.0	17.3	B31.8	
182	754.4	0.0	1.000	1.000	58019.1	363750.0	16.0	B31.8	
182	754.4	0.0	1.000	1.000	58019.1	363750.0	16.0	B31.8	
183	197.0	0.0	1.000	1.000	57461.7	363750.0	15.8	B31.8	
183	197.0	0.0	1.000	1.000	57461.4	363750.0	15.8	B31.8	
1499	755.3	0.0	1.840	1.533	58135.8	363750.0	16.0	B31.8	
1499	755.3	0.0	1.840	1.533	58135.8	363750.0	16.0	B31.8	
1500	522.9	0.0	1.840	1.533	57886.4	363750.0	15.9	B31.8	
1500	364.8	0.0	1.000	1.000	57728.3	363750.0	15.9	B31.8	
8400	1144.0	0.0	1.000	1.000	58507.4	363750.0	16.1	B31.8	
8400	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	8427.7	0.0	1.000	1.000	65791.2	363750.0	18.1	B31.8	
8420	12906.4	0.0	1.000	1.000	70269.9	363750.0	19.3	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8420	12906.4	0.0	1.000	1.000	70269.9	363750.0	19.3	B31.8	
1510	7000.4	0.0	1.000	1.000	64363.9	363750.0	17.7	B31.8	
1510	7000.4	0.0	1.000	1.000	64363.9	363750.0	17.7	B31.8	
1550	14855.9	0.0	1.000	1.000	72219.4	363750.0	19.9	B31.8	
180	4.0	0.0	4.759	6.011	103205.0	311257.1	33.2	B31.8	
189	0.6	0.0	1.000	1.000	103201.5	311257.1	33.2	B31.8	
189	0.6	0.0	1.000	1.000	103201.5	311257.1	33.2	B31.8	
190	0.0	0.0	1.000	1.000	103200.9	311257.1	33.2	B31.8	
30	6346.2	0.0	2.180	2.573	132846.4	363758.3	36.5	B31.8	
35	3735.2	0.0	1.000	1.000	130235.3	363758.3	35.8	B31.8	
35	3735.2	0.0	1.000	1.000	130235.3	363758.3	35.8	B31.8	
40	3880.0	0.0	1.000	1.000	130380.2	363758.3	35.8	B31.8	
40	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	15055.3	0.0	1.000	1.000	169863.2	363758.3	46.7	B31.8	
75	20839.1	0.0	1.000	1.000	175647.0	363758.3	48.3	B31.8	
75	20839.1	0.0	1.000	1.000	175647.0	363758.3	48.3	B31.8	
80	48170.8	0.0	3.577	3.577	202978.6	363758.3	55.8	B31.8	
80	58271.2	0.0	3.577	3.577	125245.5	363750.0	34.4	B31.8	
5495	7484.2	0.0	1.000	1.000	74458.5	363750.0	20.5	B31.8	
5495	7484.2	0.0	1.000	1.000	74458.5	363750.0	20.5	B31.8	
5501	1016.6	0.0	2.004	1.670	68018.6	363750.0	18.7	B31.8	
5501	1016.6	0.0	2.004	1.670	68018.6	363750.0	18.7	B31.8	
5500	5819.2	0.0	2.004	1.670	72843.3	363750.0	20.0	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5500	4372.3	0.0	1.000	1.000	71396.4	363750.0	19.6	B31.8	
5510	4426.1	0.0	1.000	1.000	71450.2	363750.0	19.6	B31.8	
5510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	10683.0	0.0	1.000	1.000	77707.1	363750.0	21.4	B31.8	
5530	2154.5	0.0	1.000	1.000	69178.6	363750.0	19.0	B31.8	
5530	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	1171.7	0.0	1.000	1.000	68195.8	363750.0	18.7	B31.8	
5550	711.9	0.0	1.000	1.000	67735.9	363750.0	18.6	B31.8	
5550	711.9	0.0	1.000	1.000	67735.9	363750.0	18.6	B31.8	
5559	4922.7	0.0	2.004	1.670	72290.2	363750.0	19.9	B31.8	
5559	4922.7	0.0	2.004	1.670	72290.2	363750.0	19.9	B31.8	
5560	6093.7	0.0	2.004	1.670	73615.4	363750.0	20.2	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5560	4140.8	0.0	1.000	1.000	69684.4	363750.0	19.2	B31.8	
5570	4138.6	0.0	1.000	1.000	69682.6	363750.0	19.2	B31.8	
5570	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	4440.8	0.0	1.683	1.683	70527.0	363750.0	19.4	B31.8	
5590	2095.2	0.0	1.683	1.683	113680.4	363750.0	31.3	B31.8	
5590	1626.1	210.9	1.000	1.000	7090.2	241316.5	2.9	B31.3	
5595	418.7	-210.9	1.000	1.000	6442.9	241316.5	2.7	B31.3	
5595	418.7	210.9	1.000	1.000	6442.9	241316.5	2.7	B31.3	
5599	824.8	-191.5	3.131	2.609	7022.9	241316.5	2.9	B31.3	
5599	824.8	191.5	3.131	2.609	7022.9	241316.5	2.9	B31.3	
5600	3116.4	-83.6	3.131	2.609	9212.5	241316.5	3.8	B31.3	
5600	1013.1	83.6	1.000	1.000	7109.3	241316.5	2.9	B31.3	
5605	1654.7	-83.6	1.000	1.000	7750.8	241316.5	3.2	B31.3	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5605	1654.7	83.6	1.000	1.000	7750.8	241316.5	3.2	B31.3	
5609	749.1	-84.9	3.131	2.609	6754.8	241316.5	2.8	B31.3	
5609	749.1	84.9	3.131	2.609	6754.8	241316.5	2.8	B31.3	
5610	2219.0	-310.1	3.131	2.609	8159.6	241316.5	3.4	B31.3	
5610	845.7	310.1	1.000	1.000	6786.2	241316.5	2.8	B31.3	
5620	18493.2	-319.7	6.043	7.724	24353.9	241316.5	10.1	B31.3	
5620	419.9	-0.0	6.043	7.724	8708.9	241316.5	3.6	B31.3	
2560	420.0	0.0	6.043	7.724	8709.0	241316.5	3.6	B31.3	
350	11170.7	0.0	1.482	1.642	70189.8	363750.0	19.3	B31.8	
400	6256.1	0.0	1.000	1.000	65275.2	363750.0	17.9	B31.8	
400	6256.1	0.0	1.000	1.000	65275.2	363750.0	17.9	B31.8	
410	1565.3	0.0	1.000	1.000	60584.5	363750.0	16.7	B31.8	
420	4765.6	0.0	1.482	1.642	63793.1	183754.2	34.7	B31.8	
1294	3446.6	0.0	1.000	1.000	62474.0	183754.2	34.0	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1294	3446.6	0.0	1.000	1.000	62474.0	183754.2	34.0	B31.8	
1295	2792.9	0.0	1.000	1.000	61820.3	183754.2	33.6	B31.8	
1295	2792.9	0.0	1.000	1.000	61815.5	363750.0	17.0	B31.8	
1298	3006.9	0.0	1.000	1.000	62118.3	363750.0	17.1	B31.8	
1298	4029.5	0.0	2.004	1.670	63140.9	363750.0	17.4	B31.8	
1299	5984.7	0.0	2.004	1.670	65423.1	363750.0	18.0	B31.8	
1299	5984.7	0.0	2.004	1.670	65423.1	363750.0	18.0	B31.8	
1300	11392.6	0.0	2.004	1.670	71479.5	363750.0	19.7	B31.8	
1300	7408.5	0.0	1.000	1.000	67495.5	183754.2	36.7	B31.8	
1330	7461.1	0.0	1.000	1.000	67548.1	183754.2	36.8	B31.8	
1330	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1340	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1340	1469.9	0.0	1.257	1.047	112513.6	363758.3	30.9	B31.8	
1349	3676.5	0.0	1.257	1.047	114709.3	363758.3	31.5	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1349	3676.5	0.0	1.257	1.047	114709.3	363758.3	31.5	B31.8	
1350	6170.0	0.0	1.257	1.047	117183.3	363758.3	32.2	B31.8	
1350	3483.7	0.0	1.000	1.000	114497.0	363758.3	31.5	B31.8	
1355	10544.6	0.0	1.000	1.000	121557.9	363758.3	33.4	B31.8	
1355	10551.2	0.0	1.000	1.000	121564.5	363758.3	33.4	B31.8	
1360	5453.1	0.0	1.033	1.044	116466.4	363758.3	32.0	B31.8	
410	1565.3	0.0	1.000	1.000	60584.0	363750.0	16.7	B31.8	
420	1182.7	0.0	1.482	1.642	60201.4	363750.0	16.6	B31.8	
420	339.6	0.0	1.482	1.642	59324.2	363750.0	16.3	B31.8	
429	1480.6	0.0	1.000	1.000	60465.2	363750.0	16.6	B31.8	
429	1480.6	0.0	1.000	1.000	60465.2	363750.0	16.6	B31.8	
430	3219.0	0.0	1.000	1.000	62203.6	363750.0	17.1	B31.8	
440	1316.0	0.0	1.482	1.642	60233.9	363750.0	16.6	B31.8	
1989	1192.9	0.0	1.000	1.000	60110.8	363750.0	16.5	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1989	1192.9	0.0	1.000	1.000	60110.8	363750.0	16.5	B31.8	
1990	1301.4	0.0	1.000	1.000	60219.4	363750.0	16.6	B31.8	
1990	1301.4	0.0	1.000	1.000	60216.7	363750.0	16.6	B31.8	
1998	1448.9	0.0	1.000	1.000	60453.0	363750.0	16.6	B31.8	
1998	1863.4	0.0	2.004	1.670	60867.5	363750.0	16.7	B31.8	
1999	3677.5	0.0	2.004	1.670	63022.2	363750.0	17.3	B31.8	
1999	3677.5	0.0	2.004	1.670	63022.2	363750.0	17.3	B31.8	
2000	9861.4	0.0	2.004	1.670	69923.3	363750.0	19.2	B31.8	
2000	6490.3	0.0	1.000	1.000	66552.2	363750.0	18.3	B31.8	
2030	6549.3	0.0	1.000	1.000	66611.2	363750.0	18.3	B31.8	
2030	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	1667.6	0.0	1.257	1.047	112697.7	363758.3	31.0	B31.8	
2049	1711.0	0.0	1.257	1.047	112740.7	363758.3	31.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2049	1711.0	0.0	1.257	1.047	112740.7	363758.3	31.0	B31.8	
2050	4691.1	0.0	1.257	1.047	115713.5	363758.3	31.8	B31.8	
2050	3626.5	0.0	1.000	1.000	114649.0	363758.3	31.5	B31.8	
2060	10166.6	0.0	1.000	1.000	121189.0	363758.3	33.3	B31.8	
2060	10166.6	0.0	1.000	1.000	121189.0	363758.3	33.3	B31.8	
1950	3424.6	0.0	1.033	1.044	114447.1	363758.3	31.5	B31.8	
430	3219.0	0.0	1.000	1.000	62196.4	363750.0	17.1	B31.8	
440	2515.0	0.0	1.482	1.642	61492.4	363750.0	16.9	B31.8	
440	2869.4	0.0	1.482	1.642	61839.0	363750.0	17.0	B31.8	
449	77.7	0.0	1.000	1.000	59047.3	363750.0	16.2	B31.8	
449	77.7	0.0	1.000	1.000	59047.3	363750.0	16.2	B31.8	
450	2438.5	0.0	1.000	1.000	61408.1	363750.0	16.9	B31.8	
18000	1798.7	0.0	1.482	1.642	60712.6	363750.0	16.7	B31.8	
1044	1371.3	0.0	1.000	1.000	60285.1	363750.0	16.6	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1044	1371.3	0.0	1.000	1.000	60285.1	363750.0	16.6	B31.8	
1045	1341.9	0.0	1.000	1.000	60255.8	363750.0	16.6	B31.8	
1045	1341.9	0.0	1.000	1.000	60253.1	363750.0	16.6	B31.8	
1048	1433.4	0.0	1.000	1.000	60433.3	363750.0	16.6	B31.8	
1048	1851.3	0.0	2.004	1.670	60851.2	363750.0	16.7	B31.8	
1049	3790.9	0.0	2.004	1.670	63140.3	363750.0	17.4	B31.8	
1049	3790.9	0.0	2.004	1.670	63140.3	363750.0	17.4	B31.8	
1050	10025.5	0.0	2.004	1.670	70094.5	363750.0	19.3	B31.8	
1050	6606.1	0.0	1.000	1.000	66675.2	363750.0	18.3	B31.8	
1080	6665.1	0.0	1.000	1.000	66734.1	363750.0	18.3	B31.8	
1080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	1682.2	0.0	1.257	1.047	112719.3	363758.3	31.0	B31.8	
1099	1698.1	0.0	1.257	1.047	112731.2	363758.3	31.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1099	1698.1	0.0	1.257	1.047	112731.2	363758.3	31.0	B31.8	
1100	4708.4	0.0	1.257	1.047	115728.6	363758.3	31.8	B31.8	
1100	3669.5	0.0	1.000	1.000	114689.7	363758.3	31.5	B31.8	
1105	10218.1	0.0	1.000	1.000	121238.2	363758.3	33.3	B31.8	
1105	10218.1	0.0	1.000	1.000	121238.2	363758.3	33.3	B31.8	
1110	3564.8	0.0	1.033	1.044	114584.9	363758.3	31.5	B31.8	
450	2438.5	0.0	1.000	1.000	61406.4	363750.0	16.9	B31.8	
18000	2275.8	0.0	1.482	1.642	61243.7	363750.0	16.8	B31.8	
18000	2700.7	0.0	1.482	1.642	61659.3	363750.0	17.0	B31.8	
460	4708.4	0.0	1.000	1.000	63667.0	363750.0	17.5	B31.8	
460	4708.4	0.0	1.000	1.000	63665.3	363750.0	17.5	B31.8	
16000	3038.0	0.0	1.482	1.642	61994.9	363750.0	17.0	B31.8	
16000	77.9	0.0	1.482	1.642	59138.8	363750.0	16.3	B31.8	
469	35.1	0.0	1.000	1.000	59095.9	363750.0	16.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
469	35.1	0.0	1.000	1.000	59095.9	363750.0	16.2	B31.8	
470	0.0	0.0	1.000	1.000	59060.9	363750.0	16.2	B31.8	
16000	9631.0	0.0	1.482	1.642	68658.9	363750.0	18.9	B31.8	
489	4368.4	0.0	1.000	1.000	63396.4	363750.0	17.4	B31.8	
489	4368.4	0.0	1.000	1.000	63396.4	363750.0	17.4	B31.8	
490	1538.1	0.0	1.000	1.000	60566.1	363750.0	16.7	B31.8	
490	1538.1	0.0	1.000	1.000	60560.3	363750.0	16.6	B31.8	
509	6853.8	0.0	2.004	1.670	66248.9	363750.0	18.2	B31.8	
509	6853.8	0.0	2.004	1.670	66248.9	363750.0	18.2	B31.8	
510	11310.9	0.0	2.004	1.670	71333.7	363750.0	19.6	B31.8	
510	6705.1	0.0	1.000	1.000	66728.0	363750.0	18.3	B31.8	
540	6756.1	0.0	1.000	1.000	66779.0	363750.0	18.4	B31.8	
540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
550	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
550	6025.1	0.0	1.257	1.047	117037.2	363758.3	32.2	B31.8	
559	7348.7	0.0	1.257	1.047	118460.9	363758.3	32.6	B31.8	
559	7348.7	0.0	1.257	1.047	118460.9	363758.3	32.6	B31.8	
560	8514.6	0.0	1.257	1.047	119671.7	363758.3	32.9	B31.8	
560	6371.3	0.0	1.000	1.000	117528.5	363758.3	32.3	B31.8	
565	10862.7	0.0	1.000	1.000	122019.8	363758.3	33.5	B31.8	
565	10868.2	0.0	1.000	1.000	122025.3	363758.3	33.5	B31.8	
570	14093.1	0.0	1.033	1.044	125250.2	363758.3	34.4	B31.8	
570	14576.0	0.0	1.033	1.044	125557.7	363758.3	34.5	B31.8	
620	7004.3	0.0	1.000	1.000	117985.9	363758.3	32.4	B31.8	
620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	2067.9	0.0	1.000	1.000	113049.6	363758.3	31.1	B31.8	
635	5971.2	0.0	1.000	1.000	116952.9	363758.3	32.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
635	5971.7	0.0	1.000	1.000	116953.4	363758.3	32.2	B31.8	
14028	2660.8	0.0	1.000	1.000	113642.5	363758.3	31.2	B31.8	
14028	12496.9	0.0	1.257	1.047	123478.6	363758.3	33.9	B31.8	
14029	11673.8	0.0	1.257	1.047	122538.4	363758.3	33.7	B31.8	
14029	11673.9	0.0	1.257	1.047	122538.4	363758.3	33.7	B31.8	
14030	9522.5	0.0	1.257	1.047	120359.8	363758.3	33.1	B31.8	
14030	9050.3	0.0	1.000	1.000	119887.6	363758.3	33.0	B31.8	
14025	2912.1	0.0	1.000	1.000	113749.5	363758.3	31.3	B31.8	
14025	2910.9	0.0	1.000	1.000	113749.4	363758.3	31.3	B31.8	
14019	10629.2	0.0	1.257	1.047	121253.0	363758.3	33.3	B31.8	
14019	10634.0	0.0	1.257	1.047	121254.8	363758.3	33.3	B31.8	
14020	10460.4	0.0	1.257	1.047	121122.6	363758.3	33.3	B31.8	
14020	10280.7	0.0	1.000	1.000	120939.1	363758.3	33.2	B31.8	
14013	5577.9	0.0	1.000	1.000	116362.3	363758.3	32.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14013	5902.7	0.0	1.257	1.047	116683.4	363758.3	32.1	B31.8	
14014	4866.3	0.0	1.257	1.047	115760.0	363758.3	31.8	B31.8	
14014	4866.3	0.0	1.257	1.047	115759.0	363758.3	31.8	B31.8	
14015	4163.6	0.0	1.257	1.047	115217.6	363758.3	31.7	B31.8	
14015	776.8	0.0	1.000	1.000	111831.0	363758.3	30.7	B31.8	
14008	2375.0	0.0	1.000	1.000	113429.2	363758.3	31.2	B31.8	
14008	4731.2	0.0	1.257	1.047	115785.3	363758.3	31.8	B31.8	
14009	5487.7	0.0	1.257	1.047	116403.5	363758.3	32.0	B31.8	
14009	5487.7	0.0	1.257	1.047	116403.5	363758.3	32.0	B31.8	
14010	6139.3	0.0	1.257	1.047	116976.7	363758.3	32.2	B31.8	
14010	5583.3	0.0	1.000	1.000	116420.7	363758.3	32.0	B31.8	
707	13555.9	0.0	2.521	3.028	124393.2	363758.3	34.2	B31.8	
680	785.7	0.0	1.000	1.000	124284.3	363758.3	34.2	B31.8	
750	1157.0	0.0	1.000	1.000	124655.5	363758.3	34.3	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
750	1157.0	0.0	1.000	1.000	124654.7	363758.3	34.3	B31.8	
17000	2341.1	0.0	2.521	3.028	125838.7	363758.3	34.6	B31.8	
17000	2279.6	0.0	2.521	3.028	125771.0	363758.3	34.6	B31.8	
754	1285.1	0.0	1.000	1.000	124776.4	363758.3	34.3	B31.8	
754	1285.1	0.0	1.000	1.000	124776.4	363758.3	34.3	B31.8	
755	1364.8	0.0	1.000	1.000	124856.1	363758.3	34.3	B31.8	
17000	1917.3	0.0	2.521	3.028	112722.7	363758.3	31.0	B31.8	
4229	370.2	0.0	1.000	1.000	111175.7	363758.3	30.6	B31.8	
4229	370.2	0.0	1.000	1.000	111175.7	363758.3	30.6	B31.8	
4230	1385.8	0.0	1.000	1.000	112191.2	363758.3	30.8	B31.8	
4230	1385.8	0.0	1.000	1.000	112181.8	363758.3	30.8	B31.8	
17008	1945.4	0.0	1.000	1.000	112815.0	363758.3	31.0	B31.8	
17008	1950.7	0.0	1.257	1.047	112817.8	363758.3	31.0	B31.8	
17009	2368.5	0.0	1.257	1.047	113324.7	363758.3	31.2	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17009	2368.4	0.0	1.257	1.047	113323.5	363758.3	31.2	B31.8	
17010	2945.5	0.0	1.257	1.047	114001.4	363758.3	31.3	B31.8	
17010	2734.3	0.0	1.000	1.000	113790.4	363758.3	31.3	B31.8	
17018	2396.0	0.0	1.000	1.000	113452.1	363758.3	31.2	B31.8	
17018	2425.8	0.0	1.257	1.047	113481.9	363758.3	31.2	B31.8	
17019	3433.3	0.0	1.257	1.047	114482.8	363758.3	31.5	B31.8	
17019	3433.3	0.0	1.257	1.047	114482.8	363758.3	31.5	B31.8	
17020	4037.8	0.0	1.257	1.047	115062.1	363758.3	31.6	B31.8	
17020	1086.6	0.0	1.000	1.000	112110.9	363758.3	30.8	B31.8	
17025	2261.5	0.0	1.000	1.000	113285.8	363758.3	31.1	B31.8	
17025	2263.2	0.0	1.000	1.000	113287.5	363758.3	31.1	B31.8	
17029	4302.2	0.0	1.257	1.047	115297.6	363758.3	31.7	B31.8	
17029	4302.5	0.0	1.257	1.047	115297.9	363758.3	31.7	B31.8	
17030	4455.2	0.0	1.257	1.047	115434.9	363758.3	31.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17030	4113.9	0.0	1.000	1.000	115093.6	363758.3	31.6	B31.8	
1225	4714.1	0.0	1.000	1.000	115693.8	363758.3	31.8	B31.8	
1225	4624.0	0.0	1.000	1.000	115603.7	363758.3	31.8	B31.8	
1230	716.8	0.0	1.000	1.000	111696.5	363758.3	30.7	B31.8	
1230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1240	4986.9	0.0	1.000	1.000	115966.6	363758.3	31.9	B31.8	
1110	3569.5	0.0	1.033	1.044	114549.2	363758.3	31.5	B31.8	
1110	425.3	0.0	1.033	1.044	111424.2	363758.3	30.6	B31.8	
1248	666.8	0.0	1.000	1.000	111665.7	363758.3	30.7	B31.8	
1248	766.8	0.0	1.257	1.047	111766.0	363758.3	30.7	B31.8	
1249	670.3	0.0	1.257	1.047	111704.4	363758.3	30.7	B31.8	
1249	670.4	0.0	1.257	1.047	111703.4	363758.3	30.7	B31.8	
1250	604.2	0.0	1.257	1.047	111687.8	363758.3	30.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1250	604.2	0.0	1.257	1.047	111686.3	363758.3	30.7	B31.8	
17099	587.7	0.0	1.257	1.047	111655.5	363758.3	30.7	B31.8	
17099	587.7	0.0	1.257	1.047	111654.5	363758.3	30.7	B31.8	
17100	797.3	0.0	1.257	1.047	111795.9	363758.3	30.7	B31.8	
17100	634.5	0.0	1.000	1.000	111633.4	363758.3	30.7	B31.8	
17110	640.7	0.0	1.000	1.000	111639.6	363758.3	30.7	B31.8	
17110	802.1	0.0	1.000	1.000	111782.9	363758.3	30.7	B31.8	
1260	2201.5	0.0	1.000	1.000	100087.7	363758.3	27.5	B31.8	
1260	1980.9	0.0	1.000	1.000	99897.8	363758.3	27.5	B31.8	
1270	3596.7	0.0	1.000	1.000	101513.6	363758.3	27.9	B31.8	
755	1364.8	0.0	1.000	1.000	124855.2	363758.3	34.3	B31.8	
760	904.0	0.0	1.000	1.000	124394.4	363758.3	34.2	B31.8	
760	904.0	0.0	1.000	1.000	124393.6	363758.3	34.2	B31.8	
19000	1595.4	0.0	2.521	3.028	125085.0	363758.3	34.4	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19000	1580.7	0.0	2.521	3.028	125065.8	363758.3	34.4	B31.8	
769	842.6	0.0	1.000	1.000	124327.8	363758.3	34.2	B31.8	
769	842.6	0.0	1.000	1.000	124327.8	363758.3	34.2	B31.8	
770	849.5	0.0	1.000	1.000	124334.6	363758.3	34.2	B31.8	
19000	743.4	0.0	2.521	3.028	111528.1	363758.3	30.7	B31.8	
4299	308.9	0.0	1.000	1.000	111093.6	363758.3	30.5	B31.8	
4299	308.9	0.0	1.000	1.000	111093.6	363758.3	30.5	B31.8	
4300	953.4	0.0	1.000	1.000	111738.1	363758.3	30.7	B31.8	
4300	952.9	0.0	1.000	1.000	111729.0	363758.3	30.7	B31.8	
19009	1559.0	0.0	1.257	1.047	112490.3	363758.3	30.9	B31.8	
19009	1560.4	0.0	1.257	1.047	112489.5	363758.3	30.9	B31.8	
19010	2163.4	0.0	1.257	1.047	113201.4	363758.3	31.1	B31.8	
19010	1936.2	0.0	1.000	1.000	112974.5	363758.3	31.1	B31.8	
19018	1746.5	0.0	1.000	1.000	112784.8	363758.3	31.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19018	1793.3	0.0	1.257	1.047	112831.6	363758.3	31.0	B31.8	
19019	2717.9	0.0	1.257	1.047	113752.2	363758.3	31.3	B31.8	
19019	2717.9	0.0	1.257	1.047	113752.2	363758.3	31.3	B31.8	
19020	3316.3	0.0	1.257	1.047	114337.0	363758.3	31.4	B31.8	
19020	957.9	0.0	1.000	1.000	111978.6	363758.3	30.8	B31.8	
19025	2110.7	0.0	1.000	1.000	113131.3	363758.3	31.1	B31.8	
19025	2112.4	0.0	1.000	1.000	113133.0	363758.3	31.1	B31.8	
19029	3571.8	0.0	1.257	1.047	114577.2	363758.3	31.5	B31.8	
19029	3572.0	0.0	1.257	1.047	114577.4	363758.3	31.5	B31.8	
19030	3764.2	0.0	1.257	1.047	114761.8	363758.3	31.5	B31.8	
19030	3471.5	0.0	1.000	1.000	114469.1	363758.3	31.5	B31.8	
1925	4567.1	0.0	1.000	1.000	115564.6	363758.3	31.8	B31.8	
1925	4476.4	0.0	1.000	1.000	115473.9	363758.3	31.7	B31.8	
1930	367.4	0.0	1.000	1.000	111364.9	363758.3	30.6	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1930	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	5117.5	0.0	1.000	1.000	116115.1	363758.3	31.9	B31.8	
1950	3562.0	0.0	1.033	1.044	114559.5	363758.3	31.5	B31.8	
1950	548.7	0.0	1.033	1.044	111558.4	363758.3	30.7	B31.8	
1958	618.9	0.0	1.000	1.000	111628.6	363758.3	30.7	B31.8	
1958	758.7	0.0	1.257	1.047	111768.6	363758.3	30.7	B31.8	
1959	634.9	0.0	1.257	1.047	111683.6	363758.3	30.7	B31.8	
1959	635.0	0.0	1.257	1.047	111682.7	363758.3	30.7	B31.8	
1960	581.2	0.0	1.257	1.047	111674.8	363758.3	30.7	B31.8	
1960	581.2	0.0	1.257	1.047	111673.4	363758.3	30.7	B31.8	
19099	558.1	0.0	1.257	1.047	111640.6	363758.3	30.7	B31.8	
19099	558.1	0.0	1.257	1.047	111639.6	363758.3	30.7	B31.8	
19100	760.1	0.0	1.257	1.047	111769.6	363758.3	30.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19100	548.1	0.0	1.000	1.000	111557.8	363758.3	30.7	B31.8	
19110	555.6	0.0	1.000	1.000	111565.3	363758.3	30.7	B31.8	
19110	765.4	0.0	1.000	1.000	111775.1	363758.3	30.7	B31.8	
1970	2209.8	0.0	1.000	1.000	100143.1	363758.3	27.5	B31.8	
1970	1939.9	0.0	1.000	1.000	99873.2	363758.3	27.5	B31.8	
1980	3737.9	0.0	1.000	1.000	101671.2	363758.3	28.0	B31.8	
770	849.5	0.0	1.000	1.000	124333.7	363758.3	34.2	B31.8	
780	442.9	0.0	1.000	1.000	123927.1	363758.3	34.1	B31.8	
780	442.9	0.0	1.000	1.000	123926.2	363758.3	34.1	B31.8	
13000	777.0	0.0	2.521	3.028	124260.3	363758.3	34.2	B31.8	
13000	758.2	0.0	2.521	3.028	124237.2	363758.3	34.2	B31.8	
789	431.6	0.0	1.000	1.000	123910.5	363758.3	34.1	B31.8	
789	431.6	0.0	1.000	1.000	123910.5	363758.3	34.1	B31.8	
790	462.4	0.0	1.000	1.000	123941.4	363758.3	34.1	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
13000	1319.6	0.0	2.521	3.028	112103.7	363758.3	30.8	B31.8	
4399	192.6	0.0	1.000	1.000	110976.7	363758.3	30.5	B31.8	
4399	192.6	0.0	1.000	1.000	110976.7	363758.3	30.5	B31.8	
4400	856.1	0.0	1.000	1.000	111640.2	363758.3	30.7	B31.8	
4400	856.1	0.0	1.000	1.000	111632.8	363758.3	30.7	B31.8	
13008	1241.6	0.0	1.000	1.000	112091.9	363758.3	30.8	B31.8	
13008	1247.6	0.0	1.257	1.047	112095.4	363758.3	30.8	B31.8	
13009	1620.8	0.0	1.257	1.047	112555.5	363758.3	30.9	B31.8	
13009	1620.7	0.0	1.257	1.047	112554.3	363758.3	30.9	B31.8	
13010	2232.7	0.0	1.257	1.047	113277.4	363758.3	31.1	B31.8	
13010	1983.5	0.0	1.000	1.000	113028.4	363758.3	31.1	B31.8	
13018	1723.5	0.0	1.000	1.000	112768.4	363758.3	31.0	B31.8	
13018	1805.7	0.0	1.257	1.047	112850.6	363758.3	31.0	B31.8	
13019	2684.3	0.0	1.257	1.047	113727.0	363758.3	31.3	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
13019	2684.3	0.0	1.257	1.047	113727.0	363758.3	31.3	B31.8	
13020	3242.1	0.0	1.257	1.047	114268.1	363758.3	31.4	B31.8	
13020	945.7	0.0	1.000	1.000	111971.7	363758.3	30.8	B31.8	
13025	2050.4	0.0	1.000	1.000	113076.4	363758.3	31.1	B31.8	
13025	2052.1	0.0	1.000	1.000	113078.1	363758.3	31.1	B31.8	
13029	3471.9	0.0	1.257	1.047	114476.4	363758.3	31.5	B31.8	
13029	3472.1	0.0	1.257	1.047	114476.6	363758.3	31.5	B31.8	
13030	3675.6	0.0	1.257	1.047	114666.5	363758.3	31.5	B31.8	
13030	3411.0	0.0	1.000	1.000	114401.9	363758.3	31.4	B31.8	
1425	4507.6	0.0	1.000	1.000	115498.5	363758.3	31.8	B31.8	
1425	4417.6	0.0	1.000	1.000	115408.5	363758.3	31.7	B31.8	
1430	659.7	0.0	1.000	1.000	111650.6	363758.3	30.7	B31.8	
1430	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1440	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1440	6251.9	0.0	1.000	1.000	117242.8	363758.3	32.2	B31.8	
1360	4724.9	0.0	1.033	1.044	115715.8	363758.3	31.8	B31.8	
1360	777.5	0.0	1.033	1.044	111794.2	363758.3	30.7	B31.8	
1448	284.2	0.0	1.000	1.000	111300.8	363758.3	30.6	B31.8	
1448	517.1	0.0	1.257	1.047	111534.0	363758.3	30.7	B31.8	
1449	509.1	0.0	1.257	1.047	111538.5	363758.3	30.7	B31.8	
1449	509.2	0.0	1.257	1.047	111537.5	363758.3	30.7	B31.8	
1450	499.5	0.0	1.257	1.047	111558.8	363758.3	30.7	B31.8	
1450	487.3	0.0	1.000	1.000	111545.8	363758.3	30.7	B31.8	
15098	487.5	0.0	1.000	1.000	111546.4	363758.3	30.7	B31.8	
15098	499.7	0.0	1.257	1.047	111557.9	363758.3	30.7	B31.8	
15099	483.6	0.0	1.257	1.047	111547.0	363758.3	30.7	B31.8	
15099	483.6	0.0	1.257	1.047	111545.9	363758.3	30.7	B31.8	
15100	565.4	0.0	1.257	1.047	111581.8	363758.3	30.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
15100	307.7	0.0	1.000	1.000	111324.3	363758.3	30.6	B31.8	
15110	313.2	0.0	1.000	1.000	111329.9	363758.3	30.6	B31.8	
15110	568.3	0.0	1.000	1.000	111570.5	363758.3	30.7	B31.8	
1460	1570.6	0.0	1.000	1.000	99489.2	363758.3	27.4	B31.8	
1460	1250.8	0.0	1.000	1.000	99194.5	363758.3	27.3	B31.8	
1470	2625.5	0.0	1.000	1.000	100569.3	363758.3	27.6	B31.8	
790	462.4	0.0	1.000	1.000	123940.8	363758.3	34.1	B31.8	
800	416.7	0.0	1.000	1.000	123895.1	363758.3	34.1	B31.8	
800	416.7	0.0	1.000	1.000	123894.0	363758.3	34.1	B31.8	
810	377.8	0.0	1.000	1.000	123855.0	363758.3	34.0	B31.8	
810	377.8	0.0	1.000	1.000	123853.7	363758.3	34.0	B31.8	
820	75.9	0.0	1.000	1.000	123551.9	363758.3	34.0	B31.8	
820	75.9	0.0	1.000	1.000	123551.1	363758.3	34.0	B31.8	
12000	18.6	0.0	2.521	3.028	123493.8	363758.3	33.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12000	17.1	0.0	2.521	3.028	123488.1	363758.3	33.9	B31.8	
829	4.5	0.0	1.000	1.000	123475.5	363758.3	33.9	B31.8	
829	4.5	0.0	1.000	1.000	123475.5	363758.3	33.9	B31.8	
830	0.0	0.0	1.000	1.000	123471.0	363758.3	33.9	B31.8	
12000	779.8	0.0	2.521	3.028	111573.8	363758.3	30.7	B31.8	
831	410.0	0.0	1.000	1.000	111204.0	363758.3	30.6	B31.8	
831	410.0	0.0	1.000	1.000	111204.0	363758.3	30.6	B31.8	
832	1147.3	0.0	1.000	1.000	111941.4	363758.3	30.8	B31.8	
832	1147.3	0.0	1.000	1.000	111933.1	363758.3	30.8	B31.8	
12008	1601.0	0.0	1.000	1.000	112460.3	363758.3	30.9	B31.8	
12008	1605.2	0.0	1.257	1.047	112462.0	363758.3	30.9	B31.8	
12009	1993.4	0.0	1.257	1.047	112937.0	363758.3	31.0	B31.8	
12009	1993.2	0.0	1.257	1.047	112935.9	363758.3	31.0	B31.8	
12010	2582.5	0.0	1.257	1.047	113631.0	363758.3	31.2	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12010	2430.6	0.0	1.000	1.000	113479.3	363758.3	31.2	B31.8	
12015	2438.0	0.0	1.000	1.000	113486.6	363758.3	31.2	B31.8	
12015	2401.3	0.0	1.000	1.000	113450.0	363758.3	31.2	B31.8	
12017	2895.2	0.0	1.000	1.000	113943.9	363758.3	31.3	B31.8	
12017	2914.1	0.0	1.000	1.000	113962.8	363758.3	31.3	B31.8	
12018	1963.8	0.0	1.000	1.000	113012.5	363758.3	31.1	B31.8	
12018	2134.4	0.0	1.257	1.047	113183.1	363758.3	31.1	B31.8	
12019	3060.1	0.0	1.257	1.047	114105.7	363758.3	31.4	B31.8	
12019	3060.1	0.0	1.257	1.047	114105.7	363758.3	31.4	B31.8	
12020	3611.9	0.0	1.257	1.047	114638.3	363758.3	31.5	B31.8	
12020	930.5	0.0	1.000	1.000	111956.9	363758.3	30.8	B31.8	
12025	2065.8	0.0	1.000	1.000	113092.1	363758.3	31.1	B31.8	
12025	2067.5	0.0	1.000	1.000	113093.8	363758.3	31.1	B31.8	
12029	3850.9	0.0	1.257	1.047	114853.0	363758.3	31.6	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12029	3851.2	0.0	1.257	1.047	114853.3	363758.3	31.6	B31.8	
12030	4030.8	0.0	1.257	1.047	115017.9	363758.3	31.6	B31.8	
12030	3754.6	0.0	1.000	1.000	114741.8	363758.3	31.5	B31.8	
885	4653.6	0.0	1.000	1.000	115640.8	363758.3	31.8	B31.8	
885	4563.7	0.0	1.000	1.000	115550.9	363758.3	31.8	B31.8	
890	747.2	0.0	1.000	1.000	111734.4	363758.3	30.7	B31.8	
890	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	5938.0	0.0	1.000	1.000	116925.1	363758.3	32.1	B31.8	
910	4441.0	0.0	1.033	1.044	115428.2	363758.3	31.7	B31.8	
910	624.8	0.0	1.033	1.044	111633.6	363758.3	30.7	B31.8	
918	372.8	0.0	1.000	1.000	111381.5	363758.3	30.6	B31.8	
918	602.4	0.0	1.257	1.047	111611.3	363758.3	30.7	B31.8	
919	565.4	0.0	1.257	1.047	111593.2	363758.3	30.7	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
919	565.5	0.0	1.257	1.047	111592.2	363758.3	30.7	B31.8	
920	509.8	0.0	1.257	1.047	111574.6	363758.3	30.7	B31.8	
920	509.8	0.0	1.257	1.047	111573.2	363758.3	30.7	B31.8	
15009	460.0	0.0	1.257	1.047	111521.5	363758.3	30.7	B31.8	
15009	460.0	0.0	1.257	1.047	111520.5	363758.3	30.7	B31.8	
15010	582.4	0.0	1.257	1.047	111590.9	363758.3	30.7	B31.8	
15010	381.2	0.0	1.000	1.000	111389.9	363758.3	30.6	B31.8	
15020	387.1	0.0	1.000	1.000	111395.8	363758.3	30.6	B31.8	
15020	586.2	0.0	1.000	1.000	111579.8	363758.3	30.7	B31.8	
930	1679.1	0.0	1.000	1.000	99584.6	363758.3	27.4	B31.8	
930	1425.5	0.0	1.000	1.000	99357.3	363758.3	27.3	B31.8	
940	2863.5	0.0	1.000	1.000	100795.3	363758.3	27.7	B31.8	
680	785.7	0.0	1.000	1.000	124285.2	363758.3	34.2	B31.8	
14000	1600.6	0.0	1.000	1.000	125100.0	363758.3	34.4	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14000	1600.6	0.0	1.000	1.000	125100.2	363758.3	34.4	B31.8	
690	2243.7	0.0	1.000	1.000	125743.4	363758.3	34.6	B31.8	
690	2243.7	0.0	1.000	1.000	125743.6	363758.3	34.6	B31.8	
691	3345.4	0.0	1.000	1.000	126845.3	363758.3	34.9	B31.8	
691	3346.0	0.0	1.269	1.057	126846.2	363758.3	34.9	B31.8	
692	4278.0	0.0	1.269	1.057	127651.5	363758.3	35.1	B31.8	
692	4278.0	0.0	1.269	1.057	127648.4	363758.3	35.1	B31.8	
700	4879.7	0.0	1.269	1.057	128181.5	363758.3	35.2	B31.8	
700	4876.2	0.0	1.000	1.000	128173.3	363758.3	35.2	B31.8	
704	4946.7	0.0	1.000	1.000	128243.7	363758.3	35.3	B31.8	
704	4946.7	0.0	1.000	1.000	128243.7	363758.3	35.3	B31.8	
705	5151.9	0.0	1.000	1.000	128465.0	363758.3	35.3	B31.8	
705	5151.9	0.0	1.000	1.000	128462.4	363750.0	35.3	B31.8	
740	5215.1	0.0	1.000	1.000	128546.7	363750.0	35.3	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
740	5215.1	0.0	1.000	1.000	128544.7	363750.0	35.3	B31.8	
745	5910.9	0.0	1.000	1.000	129473.0	363750.0	35.6	B31.8	
745	5910.9	0.0	1.000	1.000	129470.8	363750.0	35.6	B31.8	
707	11419.1	0.0	2.521	3.028	135021.2	363750.0	37.1	B31.8	
707	11810.9	0.0	2.521	3.028	135413.5	363750.0	37.2	B31.8	
709	5847.8	0.0	1.269	1.057	129682.5	363750.0	35.7	B31.8	
709	5850.0	0.0	1.269	1.057	129682.2	363750.0	35.7	B31.8	
710	3286.2	0.0	1.269	1.057	126779.9	363750.0	34.9	B31.8	
710	3283.8	0.0	1.000	1.000	126777.1	363758.3	34.9	B31.8	
719	2246.9	0.0	1.269	1.057	125234.4	363758.3	34.4	B31.8	
719	2246.1	0.0	1.269	1.057	125235.3	363758.3	34.4	B31.8	
720	3841.7	0.0	1.269	1.057	126526.2	363758.3	34.8	B31.8	
720	3826.7	0.0	1.000	1.000	126511.9	363758.3	34.8	B31.8	
730	3828.3	0.0	1.000	1.000	126512.5	363758.3	34.8	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
730	3828.3	0.0	1.000	1.000	126512.9	363758.3	34.8	B31.8	
4000	3923.0	0.0	1.096	1.128	126555.2	363758.3	34.8	B31.8	
4000	3386.2	0.0	1.096	1.128	126857.1	363758.3	34.9	B31.8	
4100	2736.3	0.0	1.000	1.000	126207.2	363758.3	34.7	B31.8	
4100	2736.6	0.0	1.000	1.000	126207.5	363758.3	34.7	B31.8	
4110	2833.4	0.0	1.000	1.000	126304.3	363758.3	34.7	B31.8	
4110	2804.7	0.0	1.000	1.000	126275.6	363758.3	34.7	B31.8	
4120	2218.6	0.0	1.000	1.000	125689.5	363758.3	34.6	B31.8	
4120	2253.1	0.0	1.000	1.000	125724.0	363758.3	34.6	B31.8	
4130	6561.2	0.0	1.000	1.000	130032.1	363758.3	35.7	B31.8	
4130	6514.3	0.0	1.000	1.000	129985.2	363758.3	35.7	B31.8	
4140	2462.3	0.0	1.096	1.128	125933.3	363758.3	34.6	B31.8	
4140	2523.7	0.0	1.096	1.128	125972.2	363758.3	34.6	B31.8	
7199	2600.4	0.0	1.269	1.057	126095.2	363758.3	34.7	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7199	2599.8	0.0	1.269	1.057	126094.1	363758.3	34.7	B31.8	
7200	2809.4	0.0	1.269	1.057	126280.6	363758.3	34.7	B31.8	
7200	2733.7	0.0	1.000	1.000	126205.1	363758.3	34.7	B31.8	
7210	6076.3	0.0	1.000	1.000	129547.7	363758.3	35.6	B31.8	
7210	6093.2	0.0	1.000	1.000	129564.5	363758.3	35.6	B31.8	
7220	1065.3	0.0	1.000	1.000	124536.6	363758.3	34.2	B31.8	
7220	1115.0	0.0	1.000	1.000	124586.3	363758.3	34.2	B31.8	
7230	4344.2	0.0	1.000	1.000	127815.6	363758.3	35.1	B31.8	
7230	4340.1	0.0	1.000	1.000	127811.4	363758.3	35.1	B31.8	
7240	700.0	0.0	1.096	1.128	124171.4	363758.3	34.1	B31.8	
7240	2651.4	0.0	1.096	1.128	126122.3	363758.3	34.7	B31.8	
7600	617.5	0.0	1.000	1.000	124088.4	363758.3	34.1	B31.8	
7600	636.5	0.0	1.000	1.000	124182.6	363758.3	34.1	B31.8	
7610	4650.9	0.0	1.000	1.000	128184.8	363758.3	35.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7610	4637.6	0.0	1.000	1.000	128033.8	363758.3	35.2	B31.8	
7615	7253.6	0.0	1.000	1.000	130649.8	363758.3	35.9	B31.8	
7615	7262.3	0.0	1.000	1.000	130578.3	363758.3	35.9	B31.8	
7620	7055.2	0.0	1.000	1.000	128411.5	363758.3	35.3	B31.8	
7620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	2161.6	0.0	1.000	1.000	123634.4	363758.3	34.0	B31.8	
7660	549.0	0.0	1.000	1.000	122021.8	363758.3	33.5	B31.8	
7660	601.1	0.0	1.000	1.000	122073.9	363758.3	33.6	B31.8	
7670	11882.7	0.0	1.000	1.000	133355.5	363758.3	36.7	B31.8	
7670	11828.3	0.0	1.000	1.000	133301.1	363758.3	36.6	B31.8	
7679	993.9	0.0	1.257	1.048	122466.7	363758.3	33.7	B31.8	
7679	998.6	0.0	1.257	1.048	122471.4	363758.3	33.7	B31.8	
7680	1569.5	0.0	1.257	1.048	123042.3	363758.3	33.8	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7680	1487.0	0.0	1.000	1.000	122959.7	363758.3	33.8	B31.8	
7690	5207.3	0.0	1.000	1.000	126680.1	363758.3	34.8	B31.8	
7690	5131.0	0.0	1.000	1.000	126603.8	363758.3	34.8	B31.8	
7699	1274.2	0.0	1.257	1.048	122747.0	363758.3	33.7	B31.8	
7699	1274.0	0.0	1.257	1.048	122746.8	363758.3	33.7	B31.8	
7700	2884.9	0.0	1.257	1.048	124357.7	363758.3	34.2	B31.8	
7700	2683.5	0.0	1.000	1.000	124156.4	363758.3	34.1	B31.8	
7708	2768.7	0.0	1.000	1.000	124241.5	363758.3	34.2	B31.8	
7708	2970.0	0.0	1.257	1.048	124442.8	363758.3	34.2	B31.8	
7709	1341.3	0.0	1.257	1.048	122814.2	363758.3	33.8	B31.8	
7709	1341.3	0.0	1.257	1.048	122814.2	363758.3	33.8	B31.8	
7710	2958.8	0.0	1.257	1.048	124431.7	363758.3	34.2	B31.8	
7710	2951.3	0.0	1.000	1.000	124424.2	363758.3	34.2	B31.8	
7720	5095.0	0.0	1.000	1.000	126567.9	363758.3	34.8	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7720	5174.4	0.0	1.000	1.000	126647.3	363758.3	34.8	B31.8	
7728	912.5	0.0	1.000	1.000	122385.4	363758.3	33.6	B31.8	
7728	1012.6	0.0	1.257	1.048	122485.4	363758.3	33.7	B31.8	
7729	361.5	0.0	1.257	1.048	121834.4	363758.3	33.5	B31.8	
7729	361.5	0.0	1.257	1.048	121834.4	363758.3	33.5	B31.8	
7730	977.5	0.0	1.257	1.048	122450.3	363758.3	33.7	B31.8	
7730	1008.8	0.0	1.000	1.000	122481.6	363758.3	33.7	B31.8	
7740	12181.4	0.0	1.000	1.000	133654.3	363758.3	36.7	B31.8	
7740	12252.9	0.0	1.000	1.000	133725.7	363758.3	36.8	B31.8	
7750	78.0	0.0	1.000	1.000	121550.8	363758.3	33.4	B31.8	
7750	78.0	0.0	1.000	1.000	121550.8	363758.3	33.4	B31.8	
7760	3216.9	0.0	1.000	1.000	124689.7	363758.3	34.3	B31.8	
7760	3114.4	0.0	1.000	1.000	124587.3	363758.3	34.3	B31.8	
7770	1528.2	0.0	1.000	1.000	123001.0	363758.3	33.8	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7770	1591.0	0.0	1.000	1.000	123063.8	363758.3	33.8	B31.8	
7780	1115.1	0.0	1.000	1.000	122588.0	363758.3	33.7	B31.8	
7780	1052.0	0.0	1.000	1.000	122524.9	363758.3	33.7	B31.8	
7790	2304.4	0.0	1.000	1.000	123777.2	363758.3	34.0	B31.8	
7790	2407.2	0.0	1.000	1.000	123880.0	363758.3	34.1	B31.8	
7800	2615.2	0.0	1.000	1.000	124088.0	363758.3	34.1	B31.8	
7800	2615.2	0.0	1.000	1.000	124088.0	363758.3	34.1	B31.8	
7810	2564.7	0.0	1.000	1.000	124037.5	363758.3	34.1	B31.8	
7810	2564.7	0.0	1.000	1.000	124037.5	363758.3	34.1	B31.8	
7820	2565.2	0.0	1.000	1.000	124038.0	363758.3	34.1	B31.8	
7820	2565.2	0.0	1.000	1.000	124038.0	363758.3	34.1	B31.8	
7830	2613.7	0.0	1.000	1.000	124086.6	363758.3	34.1	B31.8	
7830	2613.7	0.0	1.000	1.000	124086.6	363758.3	34.1	B31.8	
7840	2412.5	0.0	1.000	1.000	123885.3	363758.3	34.1	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7840	2310.1	0.0	1.000	1.000	123782.9	363758.3	34.0	B31.8	
7850	905.1	0.0	1.000	1.000	122377.9	363758.3	33.6	B31.8	
7850	967.9	0.0	1.000	1.000	122440.7	363758.3	33.7	B31.8	
7860	1744.7	0.0	1.000	1.000	123217.5	363758.3	33.9	B31.8	
7860	1681.6	0.0	1.000	1.000	123154.4	363758.3	33.9	B31.8	
7870	3093.3	0.0	1.000	1.000	124566.1	363758.3	34.2	B31.8	
7870	3196.1	0.0	1.000	1.000	124668.9	363758.3	34.3	B31.8	
7880	157.1	0.0	1.000	1.000	121629.9	363758.3	33.4	B31.8	
7880	53.7	0.0	1.000	1.000	121526.5	363750.0	33.4	B31.8	
7890	0.4	0.0	1.000	1.000	121473.2	363750.0	33.4	B31.8	
7240	1973.3	0.0	1.096	1.128	125444.2	363758.3	34.5	B31.8	
7250	2916.7	0.0	1.000	1.000	126387.7	363758.3	34.7	B31.8	
7250	2916.9	0.0	1.000	1.000	126357.3	363758.3	34.7	B31.8	
7260	8459.9	0.0	1.000	1.000	131815.4	363758.3	36.2	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7260	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	3547.1	0.0	1.000	1.000	126943.2	363758.3	34.9	B31.8	
7280	3369.1	0.0	1.000	1.000	126765.3	363758.3	34.8	B31.8	
7280	3368.7	0.0	1.000	1.000	126764.8	363758.3	34.8	B31.8	
7290	1977.8	0.0	1.000	1.000	125374.0	363758.3	34.5	B31.8	
7290	2017.3	0.0	1.000	1.000	125413.4	363758.3	34.5	B31.8	
7295	796.5	0.0	1.000	1.000	124192.7	363758.3	34.1	B31.8	
7295	757.8	0.0	1.000	1.000	124154.0	363758.3	34.1	B31.8	
7300	1641.9	0.0	1.000	1.000	125038.0	363758.3	34.4	B31.8	
7300	1706.3	0.0	1.000	1.000	125102.5	363758.3	34.4	B31.8	
7320	2140.4	0.0	1.000	1.000	125536.6	363758.3	34.5	B31.8	
7320	2140.4	0.0	1.000	1.000	125536.6	363758.3	34.5	B31.8	
7330	2019.6	0.0	1.000	1.000	125415.8	363758.3	34.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7330	2019.6	0.0	1.000	1.000	125415.8	363758.3	34.5	B31.8	
7340	2080.5	0.0	1.000	1.000	125476.6	363758.3	34.5	B31.8	
7340	2080.5	0.0	1.000	1.000	125476.6	363758.3	34.5	B31.8	
7350	1935.2	0.0	1.000	1.000	125331.3	363758.3	34.5	B31.8	
7350	1935.2	0.0	1.000	1.000	125331.3	363758.3	34.5	B31.8	
7370	2481.0	0.0	1.000	1.000	125877.1	363758.3	34.6	B31.8	
7370	2416.3	0.0	1.000	1.000	125812.5	363758.3	34.6	B31.8	
7373	972.7	0.0	1.000	1.000	124368.8	363758.3	34.2	B31.8	
7373	1012.3	0.0	1.000	1.000	124408.5	363758.3	34.2	B31.8	
7376	555.0	0.0	1.000	1.000	123951.1	363758.3	34.1	B31.8	
7376	594.8	0.0	1.000	1.000	123990.9	363758.3	34.1	B31.8	
7380	259.5	0.0	1.000	1.000	123655.6	363758.3	34.0	B31.8	
7380	324.2	0.0	1.000	1.000	123720.4	363758.3	34.0	B31.8	
7400	8868.1	0.0	1.000	1.000	132264.2	363758.3	36.4	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7400	8828.4	0.0	1.000	1.000	132224.5	363758.3	36.3	B31.8	
7409	798.0	0.0	1.268	1.057	124194.1	363758.3	34.1	B31.8	
7409	789.6	0.0	1.268	1.057	124185.8	363758.3	34.1	B31.8	
7410	1084.9	0.0	1.268	1.057	124481.0	363758.3	34.2	B31.8	
7410	965.8	0.0	1.000	1.000	124361.9	363758.3	34.2	B31.8	
7415	4299.0	0.0	1.000	1.000	127695.1	363758.3	35.1	B31.8	
7415	4254.2	0.0	1.000	1.000	127650.4	363758.3	35.1	B31.8	
7419	993.5	0.0	1.268	1.057	124389.7	363758.3	34.2	B31.8	
7419	993.2	0.0	1.268	1.057	124389.3	363758.3	34.2	B31.8	
7420	2525.8	0.0	1.268	1.057	125921.9	363758.3	34.6	B31.8	
7420	2493.0	0.0	1.000	1.000	125889.1	363758.3	34.6	B31.8	
7430	8630.4	0.0	1.000	1.000	132026.5	363758.3	36.3	B31.8	
7430	8630.4	0.0	1.000	1.000	132026.5	363758.3	36.3	B31.8	
7438	2530.2	0.0	1.000	1.000	125926.3	363758.3	34.6	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7438	2563.0	0.0	1.268	1.057	125959.1	363758.3	34.6	B31.8	
7439	1037.7	0.0	1.268	1.057	124433.8	363758.3	34.2	B31.8	
7439	1037.7	0.0	1.268	1.057	124433.8	363758.3	34.2	B31.8	
7440	3180.5	0.0	1.268	1.057	126576.6	363758.3	34.8	B31.8	
7440	3160.8	0.0	1.000	1.000	126556.9	363758.3	34.8	B31.8	
7445	4269.0	0.0	1.000	1.000	127665.2	363758.3	35.1	B31.8	
7445	4337.4	0.0	1.000	1.000	127733.6	363758.3	35.1	B31.8	
7449	690.2	0.0	1.268	1.057	124086.3	363758.3	34.1	B31.8	
7449	698.7	0.0	1.268	1.057	124094.8	363758.3	34.1	B31.8	
7450	1501.5	0.0	1.268	1.057	124897.6	363758.3	34.3	B31.8	
7450	1515.4	0.0	1.000	1.000	124911.6	363758.3	34.3	B31.8	
7460	8830.7	0.0	1.000	1.000	132226.8	363758.3	36.4	B31.8	
7460	8881.3	0.0	1.000	1.000	132277.4	363758.3	36.4	B31.8	
7480	883.8	0.0	1.000	1.000	124279.9	363758.3	34.2	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7480	819.1	0.0	1.000	1.000	124215.3	363758.3	34.1	B31.8	
7482	467.5	0.0	1.000	1.000	123863.6	363758.3	34.1	B31.8	
7482	427.8	0.0	1.000	1.000	123823.9	363758.3	34.0	B31.8	
7485	908.6	0.0	1.000	1.000	124304.7	363758.3	34.2	B31.8	
7485	948.4	0.0	1.000	1.000	124344.6	363758.3	34.2	B31.8	
7490	43.4	0.0	1.000	1.000	123439.6	363758.3	33.9	B31.8	
7490	43.0	0.0	1.000	1.000	123439.1	363758.3	33.9	B31.8	
7500	0.2	0.0	1.000	1.000	123396.4	363758.3	33.9	B31.8	
4140	265.3	0.0	1.096	1.128	123736.2	363758.3	34.0	B31.8	
4150	1.1	0.0	1.000	1.000	123472.0	363758.3	33.9	B31.8	
4000	2804.6	0.0	1.096	1.128	126275.5	363758.3	34.7	B31.8	
4005	4150.2	0.0	1.000	1.000	127621.1	363758.3	35.1	B31.8	
4005	4179.5	0.0	1.000	1.000	127650.5	363758.3	35.1	B31.8	
4010	959.6	0.0	1.000	1.000	124430.5	363758.3	34.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
4010	974.1	0.0	1.000	1.000	124445.0	363758.3	34.2	B31.8	
4020	2259.1	0.0	1.000	1.000	125730.0	363758.3	34.6	B31.8	
4020	2259.1	0.0	1.000	1.000	125730.0	363758.3	34.6	B31.8	
4030	1306.2	0.0	1.000	1.000	124777.1	363758.3	34.3	B31.8	
4030	1298.3	0.0	1.000	1.000	124769.2	363758.3	34.3	B31.8	
4040	3173.1	0.0	1.000	1.000	126644.1	363758.3	34.8	B31.8	
4040	3232.1	0.0	1.000	1.000	126703.0	363758.3	34.8	B31.8	
4050	3627.0	0.0	1.000	1.000	127097.9	363758.3	34.9	B31.8	
4050	3575.9	0.0	1.000	1.000	127046.8	363758.3	34.9	B31.8	
7000	548.1	0.0	1.000	1.000	124019.0	363758.3	34.1	B31.8	
7000	556.8	0.0	1.000	1.000	124027.7	363758.3	34.1	B31.8	
7010	6936.5	0.0	1.000	1.000	130407.4	363758.3	35.9	B31.8	
7010	6914.9	0.0	1.000	1.000	130385.8	363758.3	35.8	B31.8	
7032	490.1	0.0	1.000	1.000	123961.0	363758.3	34.1	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7032	1569.0	0.0	1.269	1.057	125039.9	363758.3	34.4	B31.8	
7031	1360.7	0.0	1.269	1.057	124831.6	363758.3	34.3	B31.8	
7031	1360.7	0.0	1.269	1.057	124831.6	363758.3	34.3	B31.8	
7030	647.7	0.0	1.269	1.057	124118.6	363758.3	34.1	B31.8	
7030	630.0	0.0	1.000	1.000	124100.9	363758.3	34.1	B31.8	
7040	8268.3	0.0	1.000	1.000	131739.2	363758.3	36.2	B31.8	
7040	8254.0	0.0	1.000	1.000	131724.9	363758.3	36.2	B31.8	
7050	3350.1	0.0	1.000	1.000	126821.0	363758.3	34.9	B31.8	
7050	3388.6	0.0	1.000	1.000	126859.5	363758.3	34.9	B31.8	
7060	1514.7	0.0	1.000	1.000	124985.6	363758.3	34.4	B31.8	
7060	1476.2	0.0	1.000	1.000	124947.1	363758.3	34.3	B31.8	
7070	1174.9	0.0	1.000	1.000	124645.9	363758.3	34.3	B31.8	
7070	1136.5	0.0	1.000	1.000	124607.4	363758.3	34.3	B31.8	
7080	4101.0	0.0	1.000	1.000	127571.9	363758.3	35.1	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7080	4062.5	0.0	1.000	1.000	127533.4	363758.3	35.1	B31.8	
7090	183.6	0.0	1.000	1.000	123654.5	363758.3	34.0	B31.8	
7090	145.1	0.0	1.000	1.000	123616.0	363758.3	34.0	B31.8	
7100	57.4	0.0	1.000	1.000	123528.3	363758.3	34.0	B31.8	
7100	14.7	0.0	1.000	1.000	123485.6	363758.3	33.9	B31.8	
7110	0.1	0.0	1.000	1.000	123471.0	363758.3	33.9	B31.8	
570	7871.2	0.0	1.033	1.044	118846.9	363758.3	32.7	B31.8	
578	2663.1	0.0	1.000	1.000	113638.8	363758.3	31.2	B31.8	
578	2812.0	0.0	1.257	1.047	113788.0	363758.3	31.3	B31.8	
579	2571.0	0.0	1.257	1.047	113361.6	363758.3	31.2	B31.8	
579	2571.0	0.0	1.257	1.047	113360.6	363758.3	31.2	B31.8	
580	2709.8	0.0	1.257	1.047	113472.3	363758.3	31.2	B31.8	
580	2709.8	0.0	1.257	1.047	113470.8	363758.3	31.2	B31.8	
16009	2886.7	0.0	1.257	1.047	113711.1	363758.3	31.3	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
16009	2886.7	0.0	1.257	1.047	113710.0	363758.3	31.3	B31.8	
16010	3325.0	0.0	1.257	1.047	114300.5	363758.3	31.4	B31.8	
16010	2989.2	0.0	1.000	1.000	113965.0	363758.3	31.3	B31.8	
16020	2997.4	0.0	1.000	1.000	113973.2	363758.3	31.3	B31.8	
16020	3332.5	0.0	1.000	1.000	114342.5	363758.3	31.4	B31.8	
590	7535.7	0.0	1.000	1.000	105466.2	363758.3	29.0	B31.8	
590	6959.5	0.0	1.000	1.000	104841.4	363758.3	28.8	B31.8	
600	8837.7	0.0	1.000	1.000	106719.5	363758.3	29.3	B31.8	
350	7848.8	0.0	1.482	1.642	66875.9	363750.0	18.4	B31.8	
15000	1673.1	0.0	1.482	1.642	60700.3	363750.0	16.7	B31.8	
15000	57.8	0.0	1.482	1.642	59124.2	363750.0	16.3	B31.8	
379	26.0	0.0	1.000	1.000	59092.4	363750.0	16.2	B31.8	
379	26.0	0.0	1.000	1.000	59092.4	363750.0	16.2	B31.8	
380	0.0	0.0	1.000	1.000	59066.5	363750.0	16.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
15000	5303.7	0.0	1.482	1.642	64297.1	363750.0	17.7	B31.8	
382	3668.9	0.0	1.000	1.000	62662.3	363750.0	17.2	B31.8	
382	3668.9	0.0	1.000	1.000	62662.3	363750.0	17.2	B31.8	
383	2686.2	0.0	1.000	1.000	61679.7	363750.0	17.0	B31.8	
383	2686.2	0.0	1.000	1.000	61675.4	363750.0	17.0	B31.8	
1008	2624.4	0.0	1.000	1.000	61702.4	363750.0	17.0	B31.8	
1008	3447.6	0.0	2.004	1.670	62525.6	363750.0	17.2	B31.8	
1009	5273.8	0.0	2.004	1.670	64683.1	363750.0	17.8	B31.8	
1009	5273.8	0.0	2.004	1.670	64683.1	363750.0	17.8	B31.8	
1010	10802.7	0.0	2.004	1.670	70881.9	363750.0	19.5	B31.8	
1010	7035.3	0.0	1.000	1.000	67114.5	363750.0	18.5	B31.8	
980	7089.8	0.0	1.000	1.000	67169.0	363750.0	18.5	B31.8	
980	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
970	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
970	348.6	0.0	1.000	1.000	31602.0	363750.0	8.7	B31.8	
958	327.0	0.0	1.000	1.000	31580.4	363750.0	8.7	B31.8	
958	1344.5	0.0	1.315	1.096	32597.9	363750.0	9.0	B31.8	
959	3164.0	0.0	1.315	1.096	34403.6	363750.0	9.5	B31.8	
959	3164.0	0.0	1.315	1.096	34403.6	363750.0	9.5	B31.8	
960	5721.6	0.0	1.315	1.096	36942.8	363750.0	10.2	B31.8	
960	3488.3	0.0	1.000	1.000	34709.6	363750.0	9.5	B31.8	
965	10380.4	0.0	1.000	1.000	41601.7	363750.0	11.4	B31.8	
965	10380.4	0.0	1.000	1.000	41601.7	363750.0	11.4	B31.8	
910	4969.4	0.0	1.033	1.044	36190.7	363750.0	9.9	B31.8	
80	48296.2	0.0	3.577	3.577	187043.7	363758.3	51.4	B31.8	
81	13562.4	0.0	1.000	1.000	152309.8	363758.3	41.9	B31.8	
81	13562.4	0.0	1.000	1.000	152309.8	363758.3	41.9	B31.8	
83	29941.5	0.0	3.577	3.577	168689.0	363758.3	46.4	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
83	3726.7	0.0	3.577	3.577	65066.5	363750.0	17.9	B31.8	
2199	2591.3	0.0	2.065	1.721	64374.2	363750.0	17.7	B31.8	
2199	2591.3	0.0	2.065	1.721	64374.2	363750.0	17.7	B31.8	
2200	4483.0	0.0	2.065	1.721	66065.6	363750.0	18.2	B31.8	
2200	2882.2	0.0	1.000	1.000	64464.8	363750.0	17.7	B31.8	
2205	9323.6	0.0	1.000	1.000	70906.2	363750.0	19.5	B31.8	
2205	9323.6	0.0	1.000	1.000	70906.2	363750.0	19.5	B31.8	
2211	1335.7	0.0	2.065	1.721	62914.4	363750.0	17.3	B31.8	
2211	1335.7	0.0	2.065	1.721	62914.4	363750.0	17.3	B31.8	
2210	1415.8	0.0	2.065	1.721	63004.3	363750.0	17.3	B31.8	
2210	900.8	0.0	1.000	1.000	62489.3	363750.0	17.2	B31.8	
2214	1124.2	0.0	2.065	1.721	62730.5	363750.0	17.2	B31.8	
2214	1124.2	0.0	2.065	1.721	62730.5	363750.0	17.2	B31.8	
2215	2038.7	0.0	2.065	1.721	63660.2	363750.0	17.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2215	1470.3	0.0	1.000	1.000	63091.8	363750.0	17.3	B31.8	
2220	10531.3	0.0	1.000	1.000	72152.8	363750.0	19.8	B31.8	
2220	10531.3	0.0	1.000	1.000	72152.8	363750.0	19.8	B31.8	
2225	3765.7	0.0	1.518	1.691	65387.2	363750.0	18.0	B31.8	
83	29996.9	0.0	3.577	3.577	168746.5	363750.0	46.4	B31.8	
105	9634.8	0.0	1.000	1.000	148384.3	363750.0	40.8	B31.8	
105	9634.8	0.0	1.000	1.000	148384.3	363750.0	40.8	B31.8	
110	2420.7	0.0	1.000	1.000	141170.3	363750.0	38.8	B31.8	
110	2420.7	0.0	1.000	1.000	141170.3	363750.0	38.8	B31.8	
85	1031.2	0.0	2.464	2.952	139780.8	363750.0	38.4	B31.8	
85	17498.4	0.0	2.464	2.952	76572.9	363750.0	21.1	B31.8	
338	1826.2	0.0	1.000	1.000	60900.7	363750.0	16.7	B31.8	
338	8194.9	0.0	1.966	1.639	67269.4	363750.0	18.5	B31.8	
339	7123.0	0.0	1.966	1.639	66279.3	363750.0	18.2	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
339	7123.0	0.0	1.966	1.639	66279.3	363750.0	18.2	B31.8	
360	5065.6	0.0	1.966	1.639	64251.1	363750.0	17.7	B31.8	
360	3306.5	0.0	1.000	1.000	62491.9	363750.0	17.2	B31.8	
341	5305.5	0.0	1.966	1.639	64888.2	363750.0	17.8	B31.8	
341	5305.5	0.0	1.966	1.639	64888.2	363750.0	17.8	B31.8	
340	6142.6	0.0	1.966	1.639	65774.5	363750.0	18.1	B31.8	
340	4477.4	0.0	1.000	1.000	64109.3	363750.0	17.6	B31.8	
346	4072.7	0.0	1.000	1.000	63662.9	363750.0	17.5	B31.8	
346	4072.7	0.0	1.000	1.000	63664.2	363750.0	17.5	B31.8	
349	3369.2	0.0	1.000	1.000	62960.8	363750.0	17.3	B31.8	
349	3369.2	0.0	1.000	1.000	62960.8	363750.0	17.3	B31.8	
350	3371.8	0.0	1.482	1.642	62963.4	363750.0	17.3	B31.8	
2225	2907.9	0.0	1.518	1.691	64513.5	363750.0	17.7	B31.8	
2300	2190.2	0.0	1.518	1.691	63795.9	363750.0	17.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2300	8338.1	0.0	1.518	1.691	48661.6	363750.0	13.4	B31.8	
3200	7215.1	0.0	1.000	1.000	47646.3	363750.0	13.1	B31.8	
3200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	7424.5	0.0	1.000	1.000	48350.7	363750.0	13.3	B31.8	
3220	7559.3	0.0	1.000	1.000	48521.3	363750.0	13.3	B31.8	
3220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3250	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3250	5982.3	0.0	1.854	1.854	55420.5	363750.0	15.2	B31.8	
3260	2230.7	0.0	1.854	1.854	92055.2	363750.0	25.3	B31.8	
3260	1490.5	-412.9	1.000	1.000	6899.7	241316.5	2.9	B31.3	
3280	2183.3	412.9	1.000	1.000	7592.5	241316.5	3.1	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	4373.7	-412.9	2.919	2.433	9782.9	241316.5	4.1	B31.3	
3299	1725.2	-98.6	2.919	2.433	7137.2	241316.5	3.0	B31.3	
3299	1725.2	98.6	2.919	2.433	7137.2	241316.5	3.0	B31.3	
3300	2541.8	-31.6	2.919	2.433	7953.9	241316.5	3.3	B31.3	
3300	1034.7	31.6	1.000	1.000	6446.9	241316.5	2.7	B31.3	
3309	10659.8	934.0	2.919	2.433	15863.5	241316.5	6.6	B31.3	
3309	10655.4	-934.0	2.919	2.433	15859.2	241316.5	6.6	B31.3	
3310	10986.3	1856.6	2.919	2.433	16075.4	241316.5	6.7	B31.3	
3310	3896.1	-1856.6	1.000	1.000	8985.3	241316.5	3.7	B31.3	
3320	39141.4	1445.9	6.043	7.724	44149.1	241316.5	18.3	B31.3	
2300	1143.4	0.0	1.518	1.691	62751.1	183754.2	34.1	B31.8	
2310	952.5	0.0	1.518	1.691	62560.1	183754.2	34.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2310	5457.2	0.0	1.518	1.691	45786.0	363750.0	12.6	B31.8	
2320	6318.5	0.0	1.000	1.000	46754.9	363750.0	12.9	B31.8	
2320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2500	7322.5	0.0	1.000	1.000	48254.1	363750.0	13.3	B31.8	
2504	7939.2	0.0	1.000	1.000	48906.4	363750.0	13.4	B31.8	
2504	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	5910.0	0.0	1.854	1.854	55334.9	363750.0	15.2	B31.8	
2520	2180.8	0.0	1.854	1.854	91998.8	363750.0	25.3	B31.8	
2520	1424.5	-456.5	1.000	1.000	6827.2	241316.5	2.8	B31.3	
2540	2109.6	456.5	1.000	1.000	7512.4	241316.5	3.1	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
2545	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
2545	4198.1	-456.5	2.919	2.433	9600.9	241316.5	4.0	B31.3	
2551	1877.4	-34.2	2.919	2.433	7290.2	241316.5	3.0	B31.3	
2551	1866.8	34.2	2.919	2.433	7279.6	241316.5	3.0	B31.3	
2550	2549.5	13.4	2.919	2.433	7977.5	241316.5	3.3	B31.3	
2550	1011.9	-13.4	1.000	1.000	6440.0	241316.5	2.7	B31.3	
2548	2633.0	13.4	1.000	1.000	8062.0	241316.5	3.3	B31.3	
2548	6876.3	-14.8	2.919	2.433	12296.0	241316.5	5.1	B31.3	
2549	10254.5	1003.9	2.919	2.433	15466.0	241316.5	6.4	B31.3	
2549	10254.4	-1003.9	2.919	2.433	15465.9	241316.5	6.4	B31.3	
2555	10502.8	1916.3	2.919	2.433	15594.8	241316.5	6.5	B31.3	
2555	3726.7	-1916.3	1.000	1.000	8818.8	241316.5	3.7	B31.3	
2560	39398.3	1492.3	6.043	7.724	44407.6	241316.5	18.4	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2560	534.9	0.0	6.043	7.724	8818.8	241316.5	3.7	B31.3	
6120	146.7	-0.0	1.000	1.000	8430.7	241316.5	3.5	B31.3	
3120	3291.6	0.0	6.043	7.724	11575.6	241316.5	4.8	B31.3	
3320	3291.7	-0.0	6.043	7.724	11575.6	241316.5	4.8	B31.3	
3320	1273.6	0.0	6.043	7.724	9557.6	241316.5	4.0	B31.3	
6120	146.7	-0.0	1.000	1.000	8430.7	241316.5	3.5	B31.3	
3120	21308.6	-0.0	6.043	7.724	29592.6	241316.5	12.3	B31.3	
5260	1689.5	0.0	1.000	1.000	9973.5	241316.5	4.1	B31.3	
5260	1689.5	0.0	1.000	1.000	9973.5	241316.5	4.1	B31.3	
6100	11327.3	-0.0	1.000	1.000	19611.3	241316.5	8.1	B31.3	
6100	11327.3	0.0	1.000	1.000	19611.3	241316.5	8.1	B31.3	
6110	0.0	0.0	1.000	1.000	8284.0	241316.5	3.4	B31.3	
5620	19559.6	0.0	6.043	7.724	27843.5	241316.5	11.5	B31.3	
6130	0.0	-0.0	1.000	1.000	8284.0	241316.5	3.4	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2225	3094.7	0.0	1.518	1.691	64686.8	363750.0	17.8	B31.8	
2240	1579.8	0.0	1.518	1.691	63172.0	363750.0	17.4	B31.8	
2240	7372.0	0.0	1.518	1.691	47670.5	363750.0	13.1	B31.8	
3000	6563.0	0.0	1.000	1.000	46969.2	363750.0	12.9	B31.8	
3000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	6984.0	0.0	1.000	1.000	47885.2	363750.0	13.2	B31.8	
3020	7259.2	0.0	1.000	1.000	48196.1	363750.0	13.2	B31.8	
3020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	4958.1	0.0	1.854	1.854	54375.2	363750.0	14.9	B31.8	
3060	2033.5	0.0	1.854	1.854	91847.8	363750.0	25.3	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3060	1385.7	-325.4	1.000	1.000	6784.8	241316.5	2.8	B31.3	
3080	2104.2	325.4	1.000	1.000	7503.2	241316.5	3.1	B31.3	
3080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	4363.3	-325.4	2.919	2.433	9762.3	241316.5	4.0	B31.3	
3099	1445.2	-170.6	2.919	2.433	6846.4	241316.5	2.8	B31.3	
3099	1445.2	170.6	2.919	2.433	6846.4	241316.5	2.8	B31.3	
3100	2797.9	-60.9	2.919	2.433	8205.1	241316.5	3.4	B31.3	
3100	1145.7	60.9	1.000	1.000	6552.8	241316.5	2.7	B31.3	
3108	2761.8	-60.9	1.000	1.000	8169.0	241316.5	3.4	B31.3	
3108	7327.9	60.9	2.919	2.433	12735.0	241316.5	5.3	B31.3	
3109	10795.7	930.5	2.919	2.433	16005.4	241316.5	6.6	B31.3	
3109	10795.7	-930.5	2.919	2.433	16005.3	241316.5	6.6	B31.3	
3110	10974.3	1880.1	2.919	2.433	16076.3	241316.5	6.7	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3110	3900.6	-1880.1	1.000	1.000	9002.6	241316.5	3.7	B31.3	
3120	38664.7	1464.1	6.043	7.724	43686.6	241316.5	18.1	B31.3	
2240	494.8	0.0	1.518	1.691	62096.9	363750.0	17.1	B31.8	
5000	0.0	0.0	1.000	1.000	61602.1	363750.0	16.9	B31.8	
85	2682.3	0.0	2.464	2.952	141481.0	363758.3	38.9	B31.8	
89	1215.4	0.0	2.063	1.720	140085.2	363758.3	38.5	B31.8	
89	1215.4	0.0	2.063	1.720	140085.2	363758.3	38.5	B31.8	
90	982.3	0.0	2.063	1.720	139663.2	363758.3	38.4	B31.8	
90	633.2	0.0	1.000	1.000	139314.0	363758.3	38.3	B31.8	
100	629.3	0.0	1.000	1.000	139307.9	363758.3	38.3	B31.8	
100	629.3	0.0	1.000	1.000	139307.8	363758.3	38.3	B31.8	
101	192.6	0.0	1.000	1.000	138871.1	363758.3	38.2	B31.8	
101	297.7	0.0	2.063	1.720	138976.0	363758.3	38.2	B31.8	
102	658.8	0.0	2.063	1.720	139401.4	363758.3	38.3	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
102	658.8	0.0	2.063	1.720	139401.5	363758.3	38.3	B31.8	
9100	1249.0	0.0	2.063	1.720	140055.3	363758.3	38.5	B31.8	
9100	798.5	0.0	1.000	1.000	139605.7	363758.3	38.4	B31.8	
9101	2547.4	0.0	1.000	1.000	141354.6	363758.3	38.9	B31.8	
9101	2547.4	0.0	1.000	1.000	141356.5	363758.3	38.9	B31.8	
11000	3275.5	0.0	1.000	1.000	142084.5	363758.3	39.1	B31.8	
11000	3275.5	0.0	1.000	1.000	142087.7	363758.3	39.1	B31.8	
11010	8314.1	0.0	1.000	1.000	147126.3	363758.3	40.4	B31.8	
11010	8314.1	0.0	1.000	1.000	147130.6	363758.3	40.4	B31.8	
11020	8322.8	0.0	1.000	1.000	147139.3	363758.3	40.4	B31.8	
11020	8322.8	0.0	1.000	1.000	147143.8	363758.3	40.5	B31.8	
11030	8865.9	0.0	1.000	1.000	147686.8	363758.3	40.6	B31.8	
11030	8865.9	0.0	1.000	1.000	147691.5	363758.3	40.6	B31.8	
11040	877.2	0.0	1.000	1.000	139702.7	363758.3	38.4	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11040	877.2	0.0	1.000	1.000	139705.4	363758.3	38.4	B31.8	
11041	1393.1	0.0	1.000	1.000	140221.3	363758.3	38.5	B31.8	
11041	2152.8	0.0	2.063	1.720	140981.4	363758.3	38.8	B31.8	
11042	2027.9	0.0	2.063	1.720	140845.5	363758.3	38.7	B31.8	
11042	2027.9	0.0	2.063	1.720	140844.3	363758.3	38.7	B31.8	
9110	1368.5	0.0	2.063	1.720	140108.2	363758.3	38.5	B31.8	
9110	908.4	0.0	1.000	1.000	139645.7	363758.3	38.4	B31.8	
9119	671.2	0.0	1.000	1.000	139408.5	363758.3	38.3	B31.8	
9119	671.2	0.0	1.000	1.000	139408.5	363758.3	38.3	B31.8	
9120	647.4	0.0	1.000	1.000	139384.7	363758.3	38.3	B31.8	
9120	851.8	0.0	2.063	1.720	139587.6	363758.3	38.4	B31.8	
9129	834.9	0.0	2.063	1.720	139755.6	363758.3	38.4	B31.8	
9129	834.9	0.0	2.063	1.720	139755.6	363758.3	38.4	B31.8	
9130	1388.4	0.0	2.063	1.720	140204.3	363758.3	38.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9130	799.4	0.0	1.000	1.000	139615.3	363758.3	38.4	B31.8	
10070	821.9	0.0	1.000	1.000	139637.7	363758.3	38.4	B31.8	
10070	821.9	0.0	1.000	1.000	139637.7	363758.3	38.4	B31.8	
10080	4332.0	0.0	1.000	1.000	143147.9	363758.3	39.4	B31.8	
10080	4332.0	0.0	1.000	1.000	143147.9	363758.3	39.4	B31.8	
9140	10096.9	0.0	1.000	1.000	148912.7	363758.3	40.9	B31.8	
9140	10096.9	0.0	1.000	1.000	148912.7	363758.3	40.9	B31.8	
9150	14742.8	0.0	1.000	1.000	153558.7	363758.3	42.2	B31.8	
9150	14742.8	0.0	1.000	1.000	153558.7	363758.3	42.2	B31.8	
9160	6518.3	0.0	2.464	2.952	145334.1	363758.3	40.0	B31.8	
9160	13709.9	0.0	2.464	2.952	152445.2	363758.3	41.9	B31.8	
9180	3711.0	0.0	1.000	1.000	142446.3	363758.3	39.2	B31.8	
9180	5297.3	0.0	1.880	1.880	144032.7	363758.3	39.6	B31.8	
9190	5415.6	0.0	1.880	1.880	109558.3	363758.3	30.1	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9190	5324.0	0.0	2.205	1.838	109466.7	311257.1	35.2	B31.8	
9199	1530.9	0.0	2.205	1.838	105725.2	311257.1	34.0	B31.8	
9199	1530.9	0.0	2.205	1.838	105725.2	311257.1	34.0	B31.8	
9200	6567.5	0.0	2.205	1.838	110783.0	311257.1	35.6	B31.8	
9200	4182.2	0.0	1.000	1.000	108397.7	311257.1	34.8	B31.8	
9210	4240.6	0.0	1.000	1.000	108456.1	311257.1	34.8	B31.8	
9210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	6706.2	0.0	1.000	1.000	110921.6	311257.1	35.6	B31.8	
9230	13666.4	0.0	1.000	1.000	117881.9	311257.1	37.9	B31.8	
9230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	4459.2	0.0	1.000	1.000	108674.6	311257.1	34.9	B31.8	
9250	13310.9	0.0	1.000	1.000	117526.3	311257.1	37.8	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9250	13310.9	0.0	1.000	1.000	117526.3	311257.1	37.8	B31.8	
9280	7464.5	0.0	1.000	1.000	111680.0	311257.1	35.9	B31.8	
9280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	5565.8	0.0	1.000	1.000	109781.2	311257.1	35.3	B31.8	
9300	8731.1	0.0	1.000	1.000	112946.5	311257.1	36.3	B31.8	
9300	8731.1	0.0	1.000	1.000	112946.5	311257.1	36.3	B31.8	
9310	18483.2	0.0	2.428	2.428	122698.6	311257.1	39.4	B31.8	
9310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	9210.7	0.0	1.000	1.000	113426.1	311257.1	36.4	B31.8	
9330	5416.1	0.0	2.071	2.428	109631.5	311257.1	35.2	B31.8	
9330	20294.5	0.0	2.071	2.428	124435.0	311257.1	40.0	B31.8	
9340	7491.0	0.0	2.071	2.428	111631.4	311257.1	35.9	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9340	587.9	0.0	2.071	2.428	104730.3	311257.1	33.6	B31.8	
9345	0.0	0.0	1.000	1.000	104142.4	311257.1	33.5	B31.8	
9340	4624.9	0.0	2.071	2.428	108763.5	311257.1	34.9	B31.8	
9350	4910.1	0.0	1.000	1.000	109048.7	311257.1	35.0	B31.8	
9350	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	16505.8	0.0	1.000	1.000	120644.5	311257.1	38.8	B31.8	
9370	20363.7	0.0	1.000	1.000	124502.3	311257.1	40.0	B31.8	
9370	20363.7	0.0	1.000	1.000	124502.3	311257.1	40.0	B31.8	
9378	1983.4	0.0	1.000	1.000	106122.0	311257.1	34.1	B31.8	
9378	5191.8	0.0	2.205	1.838	109330.4	311257.1	35.1	B31.8	
9379	4962.1	0.0	2.205	1.838	109100.5	311257.1	35.1	B31.8	
9379	4962.1	0.0	2.205	1.838	109100.5	311257.1	35.1	B31.8	
9380	2883.6	0.0	2.205	1.838	107024.1	311257.1	34.4	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9380	2091.5	0.0	1.000	1.000	106232.0	311257.1	34.1	B31.8	
9390	16871.6	0.0	2.071	2.428	121012.1	311257.1	38.9	B31.8	
9330	9856.8	0.0	2.071	2.428	114068.5	311257.1	36.6	B31.8	
9335	17817.5	0.0	1.000	1.000	122029.2	311257.1	39.2	B31.8	
9335	17817.5	0.0	1.000	1.000	122029.2	311257.1	39.2	B31.8	
9500	14851.3	0.0	1.000	1.000	119063.0	311257.1	38.3	B31.8	
9500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9510	8842.9	0.0	2.205	1.838	113054.6	311257.1	36.3	B31.8	
9519	8729.4	0.0	2.205	1.838	112921.9	311257.1	36.3	B31.8	
9519	8729.4	0.0	2.205	1.838	112921.9	311257.1	36.3	B31.8	
9520	9003.4	0.0	2.205	1.838	113147.3	311257.1	36.4	B31.8	
9520	5470.4	0.0	1.000	1.000	109614.3	311257.1	35.2	B31.8	
9530	5440.7	0.0	1.000	1.000	109584.6	311257.1	35.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9530	9111.5	0.0	1.880	1.880	113255.4	311257.1	36.4	B31.8	
9550	2429.2	0.0	1.880	1.880	141165.2	311257.1	45.4	B31.8	
9550	1069.9	0.0	1.000	1.000	139805.9	363758.3	38.4	B31.8	
9560	2089.5	0.0	2.464	2.952	140825.5	363758.3	38.7	B31.8	
9560	2989.4	0.0	2.464	2.952	141805.3	363758.3	39.0	B31.8	
9900	14754.5	0.0	2.464	2.952	153570.3	363758.3	42.2	B31.8	
9900	762.8	0.0	2.464	2.952	65505.8	363758.3	18.0	B31.8	
10000	0.0	0.0	1.000	1.000	64743.1	363758.3	17.8	B31.8	
9900	14753.8	0.0	2.464	2.952	153569.6	363758.3	42.2	B31.8	
9910	2406.1	0.0	1.000	1.000	141221.9	363758.3	38.8	B31.8	
9910	2406.1	0.0	1.000	1.000	141221.9	363758.3	38.8	B31.8	
9920	255.2	0.0	1.000	1.000	139071.1	363758.3	38.2	B31.8	
9920	406.4	0.0	2.063	1.720	139222.2	363758.3	38.3	B31.8	
9951	1235.6	0.0	2.063	1.720	140071.7	363758.3	38.5	B31.8	

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CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9951	1235.6	0.0	2.063	1.720	140071.7	363758.3	38.5	B31.8	
9950	696.6	0.0	2.063	1.720	139312.7	363758.3	38.3	B31.8	
9950	451.5	0.0	1.000	1.000	139067.6	363758.3	38.2	B31.8	
9960	446.6	0.0	1.000	1.000	139060.4	363758.3	38.2	B31.8	
9960	446.6	0.0	1.000	1.000	139060.5	363758.3	38.2	B31.8	
9961	101.1	0.0	1.000	1.000	138715.0	363758.3	38.1	B31.8	
9961	162.1	0.0	2.063	1.720	138776.3	363758.3	38.2	B31.8	
9962	511.5	0.0	2.063	1.720	139189.9	363758.3	38.3	B31.8	
9962	511.5	0.0	2.063	1.720	139189.2	363758.3	38.3	B31.8	
10010	1341.6	0.0	2.063	1.720	140105.4	363758.3	38.5	B31.8	
10010	870.0	0.0	1.000	1.000	139630.6	363758.3	38.4	B31.8	
10011	3579.8	0.0	1.000	1.000	142340.3	363758.3	39.1	B31.8	
10011	3579.8	0.0	1.000	1.000	142335.7	363758.3	39.1	B31.8	
10012	4920.1	0.0	1.000	1.000	143676.0	363758.3	39.5	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10012	4920.1	0.0	1.000	1.000	143672.2	363758.3	39.5	B31.8	
11100	3983.4	0.0	1.000	1.000	142735.5	363758.3	39.2	B31.8	
11100	3983.4	0.0	1.000	1.000	142726.5	363758.3	39.2	B31.8	
11110	102.6	0.0	1.000	1.000	138845.6	363758.3	38.2	B31.8	
11110	102.6	0.0	1.000	1.000	138838.3	363758.3	38.2	B31.8	
10020	58.5	0.0	1.000	1.000	138794.3	363758.3	38.2	B31.8	
10020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	29.3	0.0	1.000	1.000	138764.7	363758.3	38.1	B31.8	
10030	0.0	0.0	1.000	1.000	138735.4	363758.3	38.1	B31.8	
9560	1332.8	0.0	2.464	2.952	140067.8	363758.3	38.5	B31.8	
9580	364.9	0.0	1.000	1.000	139099.9	363758.3	38.2	B31.8	
9580	758.3	0.0	1.880	1.880	139493.3	363758.3	38.3	B31.8	
9590	2711.7	0.0	1.880	1.880	106853.9	363758.3	29.4	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9590	2689.5	0.0	2.205	1.838	106831.7	311257.1	34.3	B31.8	
9599	3406.1	0.0	2.205	1.838	107596.4	311257.1	34.6	B31.8	
9599	3406.1	0.0	2.205	1.838	107596.4	311257.1	34.6	B31.8	
9600	2738.3	0.0	2.205	1.838	106948.6	311257.1	34.4	B31.8	
9600	1418.6	0.0	1.000	1.000	105628.9	311257.1	33.9	B31.8	
9610	1413.7	0.0	1.000	1.000	105624.0	311257.1	33.9	B31.8	
9610	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	14288.6	0.0	1.000	1.000	118498.8	311257.1	38.1	B31.8	
9622	18127.3	0.0	1.000	1.000	122337.5	311257.1	39.3	B31.8	
9622	18127.3	0.0	1.000	1.000	122337.5	311257.1	39.3	B31.8	
9624	15968.5	0.0	1.000	1.000	120178.8	311257.1	38.6	B31.8	
9624	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9627	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9627	11708.5	0.0	1.000	1.000	115918.8	311257.1	37.2	B31.8	
9630	3936.9	0.0	1.000	1.000	108147.2	311257.1	34.7	B31.8	
9630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	4930.0	0.0	1.000	1.000	109140.3	311257.1	35.1	B31.8	
9650	5239.6	0.0	1.000	1.000	109449.8	311257.1	35.2	B31.8	
9650	5239.6	0.0	1.000	1.000	109449.8	311257.1	35.2	B31.8	
9660	8799.1	0.0	1.000	1.000	113009.4	311257.1	36.3	B31.8	
9660	8799.1	0.0	1.000	1.000	113009.4	311257.1	36.3	B31.8	
9670	2830.1	0.0	1.000	1.000	107040.3	311257.1	34.4	B31.8	
9670	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	1397.1	0.0	1.000	1.000	105607.4	311257.1	33.9	B31.8	
9690	9253.7	0.0	1.000	1.000	113463.9	311257.1	36.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9690	9253.7	0.0	1.000	1.000	113463.9	311257.1	36.5	B31.8	
9390	3829.3	0.0	2.071	2.428	108039.6	311257.1	34.7	B31.8	
9390	8067.1	0.0	2.071	2.428	112273.6	311257.1	36.1	B31.8	
9710	6036.1	0.0	1.000	1.000	110242.6	311257.1	35.4	B31.8	
9710	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9720	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9720	11160.4	0.0	1.000	1.000	115366.9	311257.1	37.1	B31.8	
9730	4862.1	0.0	1.000	1.000	109068.6	311257.1	35.0	B31.8	
9730	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	7779.8	0.0	2.205	1.838	111986.4	311257.1	36.0	B31.8	
9809	6274.0	0.0	2.205	1.838	110463.1	311257.1	35.5	B31.8	
9809	6274.0	0.0	2.205	1.838	110463.1	311257.1	35.5	B31.8	
9810	5463.1	0.0	2.205	1.838	109607.5	311257.1	35.2	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 1 (HYD) WW+HP

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9810	374.5	0.0	1.000	1.000	104518.9	311257.1	33.6	B31.8	
9820	441.0	0.0	1.000	1.000	104585.4	311257.1	33.6	B31.8	
9820	5469.5	0.0	1.880	1.880	109613.9	311257.1	35.2	B31.8	
9840	4465.5	0.0	1.880	1.880	143201.8	311257.1	46.0	B31.8	
9840	2792.9	0.0	1.000	1.000	141529.3	363758.3	38.9	B31.8	
9160	12447.6	0.0	2.464	2.952	151183.9	363758.3	41.6	B31.8	
2310	38.9	0.0	1.518	1.691	61641.0	363750.0	16.9	B31.8	
6000	0.0	0.0	1.000	1.000	61602.1	363750.0	16.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

Piping Code: Multiple Codes

B31.8 = B31.8 -2003, February 6, 2004

B31.3 = B31.3 -2006, May 31, 2007

NO CODE STRESS CHECK PROCESSED: LOADCASE 2 (OPE) W+D1+T1+P1

Highest Stresses: (KPa)

OPE Stress Ratio (%): 0.0 @Node 83

OPE Stress: 333166.0 Allowable: 0.0

Axial Stress: 93263.6 @Node 9840

Bending Stress: 291944.9 @Node 83

Torsion Stress: 16839.3 @Node 5609

Hoop Stress: 186534.4 @Node 75

3D Max Intensity: 461745.4 @Node 12000

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10210	0.0	0.0	1.000	1.000	76212.6	0.0	0.0	B31.8	
10200	13.5	0.0	1.000	1.000	76226.1	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10200	13.5	0.0	1.000	1.000	76226.1	0.0	0.0	B31.8	
10190	1413.2	0.0	1.000	1.000	77625.9	0.0	0.0	B31.8	
10190	1413.2	0.0	1.000	1.000	77625.9	0.0	0.0	B31.8	
10180	2229.5	0.0	1.000	1.000	78442.1	0.0	0.0	B31.8	
10180	2229.5	0.0	1.000	1.000	78442.1	0.0	0.0	B31.8	
10170	67.0	0.0	1.000	1.000	76279.6	0.0	0.0	B31.8	
10170	67.0	0.0	1.000	1.000	76279.6	0.0	0.0	B31.8	
10160	1502.5	0.0	1.000	1.000	77715.2	0.0	0.0	B31.8	
10160	1502.5	0.0	1.000	1.000	77715.2	0.0	0.0	B31.8	
10150	254.9	0.0	1.000	1.000	76467.5	0.0	0.0	B31.8	
10150	254.9	0.0	1.000	1.000	76467.5	0.0	0.0	B31.8	
10140	2395.7	0.0	1.000	1.000	78608.3	0.0	0.0	B31.8	
10140	2395.7	0.0	1.000	1.000	78608.3	0.0	0.0	B31.8	
10135	697.2	0.0	1.000	1.000	76909.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10135	697.2	0.0	1.000	1.000	76909.8	0.0	0.0	B31.8	
10130	972.6	0.0	2.180	2.573	77185.2	0.0	0.0	B31.8	
10130	110.1	0.0	2.180	2.573	76322.8	0.0	0.0	B31.8	
10300	0.0	0.0	1.000	1.000	76212.6	0.0	0.0	B31.8	
10130	862.4	0.0	2.180	2.573	76837.8	0.0	0.0	B31.8	
10260	527.5	0.0	1.000	1.000	76229.8	0.0	0.0	B31.8	
10260	527.5	0.0	1.000	1.000	76229.8	0.0	0.0	B31.8	
10250	527.5	0.0	1.000	1.000	76127.8	0.0	0.0	B31.8	
10250	527.5	0.0	1.000	1.000	76127.8	0.0	0.0	B31.8	
10120	527.5	0.0	1.000	1.000	76120.0	0.0	0.0	B31.8	
10120	527.5	0.0	1.000	1.000	76122.3	0.0	0.0	B31.8	
10121	3005.1	0.0	1.000	1.000	78600.0	0.0	0.0	B31.8	
10121	4915.7	0.0	2.190	1.825	80515.6	0.0	0.0	B31.8	
10122	8300.7	0.0	2.190	1.825	83570.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10122	8300.7	0.0	2.190	1.825	83560.5	0.0	0.0	B31.8	
10110	7821.7	0.0	2.190	1.825	83127.4	0.0	0.0	B31.8	
10110	4753.0	0.0	1.000	1.000	80003.8	0.0	0.0	B31.8	
10111	926.5	0.0	1.000	1.000	76177.2	0.0	0.0	B31.8	
10111	926.5	0.0	1.000	1.000	76107.3	0.0	0.0	B31.8	
10112	1524.0	0.0	1.000	1.000	76704.8	0.0	0.0	B31.8	
10112	1524.0	0.0	1.000	1.000	76652.1	0.0	0.0	B31.8	
11200	1012.0	0.0	1.000	1.000	76140.2	0.0	0.0	B31.8	
11200	1012.0	0.0	1.000	1.000	76035.4	0.0	0.0	B31.8	
11210	1481.7	0.0	1.000	1.000	76505.0	0.0	0.0	B31.8	
11210	1481.7	0.0	1.000	1.000	76460.7	0.0	0.0	B31.8	
11211	3105.9	0.0	1.000	1.000	78084.9	0.0	0.0	B31.8	
11211	3105.9	0.0	1.000	1.000	78073.8	0.0	0.0	B31.8	
11212	2148.8	0.0	1.000	1.000	77116.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11212	2148.8	0.0	1.000	1.000	77117.2	0.0	0.0	B31.8	
11213	8966.2	0.0	1.000	1.000	83934.6	0.0	0.0	B31.8	
11213	14726.2	0.0	2.190	1.825	89702.6	0.0	0.0	B31.8	
11214	17080.7	0.0	2.190	1.825	91829.5	0.0	0.0	B31.8	
11214	17080.7	0.0	2.190	1.825	91826.2	0.0	0.0	B31.8	
10100	11425.3	0.0	2.190	1.825	86719.4	0.0	0.0	B31.8	
10100	6951.4	0.0	1.000	1.000	82236.7	0.0	0.0	B31.8	
9	3005.4	0.0	1.000	1.000	78290.7	0.0	0.0	B31.8	
9	3005.4	0.0	1.000	1.000	78290.7	0.0	0.0	B31.8	
10	3963.2	0.0	1.000	1.000	79248.5	0.0	0.0	B31.8	
10	3963.2	0.0	1.000	1.000	79243.5	0.0	0.0	B31.8	
18	4050.3	0.0	1.000	1.000	79331.7	0.0	0.0	B31.8	
18	6676.7	0.0	2.190	1.825	81958.0	0.0	0.0	B31.8	
19	12931.9	0.0	2.190	1.825	87667.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19	12931.9	0.0	2.190	1.825	87667.8	0.0	0.0	B31.8	
20	10622.3	0.0	2.190	1.825	85607.3	0.0	0.0	B31.8	
20	6467.6	0.0	1.000	1.000	81452.7	0.0	0.0	B31.8	
30	7919.4	0.0	2.180	2.573	82904.5	0.0	0.0	B31.8	
30	27439.4	0.0	2.180	2.573	89571.0	0.0	0.0	B31.8	
119	13192.8	0.0	2.192	1.826	74593.0	0.0	0.0	B31.8	
119	13192.8	0.0	2.192	1.826	74593.0	0.0	0.0	B31.8	
120	15002.9	0.0	2.192	1.826	76080.6	0.0	0.0	B31.8	
120	10862.1	0.0	1.000	1.000	71939.8	0.0	0.0	B31.8	
125	10847.3	0.0	1.000	1.000	71923.1	0.0	0.0	B31.8	
125	10847.3	0.0	1.000	1.000	71927.2	0.0	0.0	B31.8	
149	11567.9	0.0	1.000	1.000	72647.8	0.0	0.0	B31.8	
149	11567.9	0.0	1.000	1.000	72647.8	0.0	0.0	B31.8	
150	20737.5	0.0	1.929	2.239	81817.3	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
150	14041.1	0.0	1.929	2.239	75499.6	0.0	0.0	B31.8	
220	1026.5	0.0	1.000	1.000	62485.0	0.0	0.0	B31.8	
220	1026.5	0.0	1.000	1.000	62465.5	0.0	0.0	B31.8	
229	608.4	0.0	1.000	1.000	62047.4	0.0	0.0	B31.8	
229	608.4	0.0	1.000	1.000	62047.4	0.0	0.0	B31.8	
230	11825.6	0.0	4.759	6.011	73264.5	0.0	0.0	B31.8	
230	139249.9	0.0	4.759	6.011	172865.9	0.0	0.0	B31.8	
231	15386.4	0.0	1.000	1.000	49002.4	0.0	0.0	B31.8	
231	15386.4	0.0	1.000	1.000	49002.4	0.0	0.0	B31.8	
232	268.3	0.0	1.000	1.000	33884.3	0.0	0.0	B31.8	
232	268.3	0.0	1.000	1.000	33885.3	0.0	0.0	B31.8	
1598	26249.0	0.0	1.000	1.000	59917.4	0.0	0.0	B31.8	
1598	36216.0	0.0	1.840	1.533	69884.4	0.0	0.0	B31.8	
1599	45857.4	0.0	1.840	1.533	78407.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1599	45857.4	0.0	1.840	1.533	78407.7	0.0	0.0	B31.8	
1600	45650.2	0.0	1.840	1.533	78232.0	0.0	0.0	B31.8	
1600	33088.6	0.0	1.000	1.000	65670.3	0.0	0.0	B31.8	
8300	21613.9	0.0	1.000	1.000	54195.6	0.0	0.0	B31.8	
8300	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	10720.4	0.0	1.000	1.000	43302.1	0.0	0.0	B31.8	
8320	8304.9	0.0	1.000	1.000	40886.6	0.0	0.0	B31.8	
8320	8304.9	0.0	1.000	1.000	40886.6	0.0	0.0	B31.8	
1610	5247.1	0.0	1.000	1.000	37828.8	0.0	0.0	B31.8	
1610	5247.1	0.0	1.000	1.000	37828.8	0.0	0.0	B31.8	
1650	8439.2	0.0	1.000	1.000	41021.0	0.0	0.0	B31.8	
230	9332.0	0.0	4.759	6.011	70671.4	0.0	0.0	B31.8	
240	2304.2	0.0	1.000	1.000	63643.5	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
240	2304.2	0.0	1.000	1.000	63641.9	0.0	0.0	B31.8	
249	747.5	0.0	1.000	1.000	62085.2	0.0	0.0	B31.8	
249	747.5	0.0	1.000	1.000	62085.2	0.0	0.0	B31.8	
250	5088.1	0.0	4.759	6.011	66425.8	0.0	0.0	B31.8	
250	65466.9	0.0	4.759	6.011	99088.8	0.0	0.0	B31.8	
252	4996.8	0.0	1.000	1.000	38618.6	0.0	0.0	B31.8	
252	4996.8	0.0	1.000	1.000	38618.6	0.0	0.0	B31.8	
253	4857.1	0.0	1.000	1.000	38478.9	0.0	0.0	B31.8	
253	4857.1	0.0	1.000	1.000	38481.4	0.0	0.0	B31.8	
1698	26838.3	0.0	1.000	1.000	60514.0	0.0	0.0	B31.8	
1698	37027.7	0.0	1.840	1.533	70703.5	0.0	0.0	B31.8	
1699	44873.3	0.0	1.840	1.533	77642.4	0.0	0.0	B31.8	
1699	44873.3	0.0	1.840	1.533	77642.4	0.0	0.0	B31.8	
1700	43959.2	0.0	1.840	1.533	76842.9	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1700	31862.2	0.0	1.000	1.000	64745.9	0.0	0.0	B31.8	
8200	20492.1	0.0	1.000	1.000	53375.8	0.0	0.0	B31.8	
8200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	9740.0	0.0	1.000	1.000	42623.7	0.0	0.0	B31.8	
8220	7376.7	0.0	1.000	1.000	40260.4	0.0	0.0	B31.8	
8220	7376.7	0.0	1.000	1.000	40260.4	0.0	0.0	B31.8	
1710	5649.6	0.0	1.000	1.000	38533.3	0.0	0.0	B31.8	
1710	5649.6	0.0	1.000	1.000	38533.3	0.0	0.0	B31.8	
1750	8748.1	0.0	1.000	1.000	41631.9	0.0	0.0	B31.8	
250	2888.3	0.0	4.759	6.011	64313.4	0.0	0.0	B31.8	
260	1721.5	0.0	1.000	1.000	63146.5	0.0	0.0	B31.8	
260	1721.5	0.0	1.000	1.000	63164.1	0.0	0.0	B31.8	
269	417.6	0.0	1.000	1.000	61860.2	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
269	417.6	0.0	1.000	1.000	61860.2	0.0	0.0	B31.8	
270	3930.8	0.0	4.759	6.011	65373.4	0.0	0.0	B31.8	
270	55793.8	0.0	4.759	6.011	89311.0	0.0	0.0	B31.8	
272	5530.1	0.0	1.000	1.000	39047.4	0.0	0.0	B31.8	
272	5530.1	0.0	1.000	1.000	39047.4	0.0	0.0	B31.8	
273	7797.7	0.0	1.000	1.000	41315.0	0.0	0.0	B31.8	
273	7797.7	0.0	1.000	1.000	41316.7	0.0	0.0	B31.8	
1798	28866.7	0.0	1.000	1.000	62437.1	0.0	0.0	B31.8	
1798	39836.8	0.0	1.840	1.533	73407.2	0.0	0.0	B31.8	
1799	47005.7	0.0	1.840	1.533	79748.6	0.0	0.0	B31.8	
1799	47005.7	0.0	1.840	1.533	79748.6	0.0	0.0	B31.8	
1800	45292.2	0.0	1.840	1.533	78244.2	0.0	0.0	B31.8	
1800	32828.2	0.0	1.000	1.000	65780.1	0.0	0.0	B31.8	
8100	19969.8	0.0	1.000	1.000	52921.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8100	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	3622.0	0.0	1.000	1.000	36049.2	0.0	0.0	B31.8	
8120	2094.1	0.0	1.000	1.000	34521.2	0.0	0.0	B31.8	
8120	2094.1	0.0	1.000	1.000	34521.2	0.0	0.0	B31.8	
1810	4681.8	0.0	1.000	1.000	37108.9	0.0	0.0	B31.8	
1810	9321.2	0.0	1.000	1.000	42273.2	0.0	0.0	B31.8	
1850	12775.2	0.0	1.000	1.000	45727.2	0.0	0.0	B31.8	
270	2134.6	0.0	4.759	6.011	63864.2	0.0	0.0	B31.8	
289	1012.6	0.0	1.000	1.000	62742.1	0.0	0.0	B31.8	
289	1012.6	0.0	1.000	1.000	62742.1	0.0	0.0	B31.8	
290	9329.3	0.0	4.759	6.011	71058.9	0.0	0.0	B31.8	
290	70306.7	0.0	4.759	6.011	103939.2	0.0	0.0	B31.8	
292	9420.3	0.0	1.000	1.000	43052.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
292	9420.3	0.0	1.000	1.000	43052.8	0.0	0.0	B31.8	
293	7476.8	0.0	1.000	1.000	41109.3	0.0	0.0	B31.8	
293	7476.8	0.0	1.000	1.000	41110.7	0.0	0.0	B31.8	
2098	26834.1	0.0	1.000	1.000	60519.4	0.0	0.0	B31.8	
2098	37055.1	0.0	1.840	1.533	70740.4	0.0	0.0	B31.8	
2099	43719.3	0.0	1.840	1.533	76635.6	0.0	0.0	B31.8	
2099	43719.3	0.0	1.840	1.533	76635.6	0.0	0.0	B31.8	
2100	42373.3	0.0	1.840	1.533	75455.7	0.0	0.0	B31.8	
2100	30708.4	0.0	1.000	1.000	63790.8	0.0	0.0	B31.8	
8000	19456.7	0.0	1.000	1.000	52539.1	0.0	0.0	B31.8	
8000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	8865.6	0.0	1.000	1.000	41948.0	0.0	0.0	B31.8	
8020	6572.3	0.0	1.000	1.000	39654.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8020	6572.3	0.0	1.000	1.000	39654.7	0.0	0.0	B31.8	
2110	5846.8	0.0	1.000	1.000	38929.1	0.0	0.0	B31.8	
2110	5846.8	0.0	1.000	1.000	38929.1	0.0	0.0	B31.8	
2150	9709.6	0.0	1.000	1.000	42791.9	0.0	0.0	B31.8	
290	86.6	0.0	4.759	6.011	62262.8	0.0	0.0	B31.8	
299	11.8	0.0	1.000	1.000	62187.9	0.0	0.0	B31.8	
299	11.8	0.0	1.000	1.000	62187.9	0.0	0.0	B31.8	
300	0.0	0.0	1.000	1.000	62176.2	0.0	0.0	B31.8	
150	11761.2	0.0	1.929	2.239	73469.4	0.0	0.0	B31.8	
160	2990.4	0.0	1.000	1.000	64698.7	0.0	0.0	B31.8	
160	2990.4	0.0	1.000	1.000	64737.0	0.0	0.0	B31.8	
179	984.1	0.0	1.000	1.000	62730.7	0.0	0.0	B31.8	
179	984.1	0.0	1.000	1.000	62730.7	0.0	0.0	B31.8	
180	10248.5	0.0	4.759	6.011	71995.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
180	165503.9	0.0	4.759	6.011	199124.2	0.0	0.0	B31.8	
182	19700.6	0.0	1.000	1.000	53320.9	0.0	0.0	B31.8	
182	19700.6	0.0	1.000	1.000	53320.9	0.0	0.0	B31.8	
183	1538.1	0.0	1.000	1.000	35158.4	0.0	0.0	B31.8	
183	1538.1	0.0	1.000	1.000	35159.4	0.0	0.0	B31.8	
1499	44939.1	0.0	1.840	1.533	77454.3	0.0	0.0	B31.8	
1499	44939.1	0.0	1.840	1.533	77454.3	0.0	0.0	B31.8	
1500	44900.6	0.0	1.840	1.533	77428.2	0.0	0.0	B31.8	
1500	32549.2	0.0	1.000	1.000	65076.9	0.0	0.0	B31.8	
8400	21118.3	0.0	1.000	1.000	53645.9	0.0	0.0	B31.8	
8400	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	10273.2	0.0	1.000	1.000	42800.8	0.0	0.0	B31.8	
8420	7874.9	0.0	1.000	1.000	40402.5	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8420	7874.9	0.0	1.000	1.000	40402.5	0.0	0.0	B31.8	
1510	5411.7	0.0	1.000	1.000	37939.3	0.0	0.0	B31.8	
1510	5411.7	0.0	1.000	1.000	37939.3	0.0	0.0	B31.8	
1550	8951.0	0.0	1.000	1.000	41478.6	0.0	0.0	B31.8	
180	144.0	0.0	4.759	6.011	62320.2	0.0	0.0	B31.8	
189	17.6	0.0	1.000	1.000	62193.8	0.0	0.0	B31.8	
189	17.6	0.0	1.000	1.000	62193.8	0.0	0.0	B31.8	
190	0.0	0.0	1.000	1.000	62176.2	0.0	0.0	B31.8	
30	16373.3	0.0	2.180	2.573	91318.6	0.0	0.0	B31.8	
35	4408.3	0.0	1.000	1.000	79353.6	0.0	0.0	B31.8	
35	4408.3	0.0	1.000	1.000	79353.6	0.0	0.0	B31.8	
40	4128.7	0.0	1.000	1.000	79074.1	0.0	0.0	B31.8	
40	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	4671.4	0.0	1.000	1.000	96394.4	0.0	0.0	B31.8	
75	3176.4	0.0	1.000	1.000	94899.4	0.0	0.0	B31.8	
75	3176.4	0.0	1.000	1.000	94899.4	0.0	0.0	B31.8	
80	10230.6	0.0	3.577	3.577	101953.6	0.0	0.0	B31.8	
80	134718.7	0.0	3.577	3.577	175810.3	0.0	0.0	B31.8	
5495	44794.0	0.0	1.000	1.000	85885.6	0.0	0.0	B31.8	
5495	44794.0	0.0	1.000	1.000	85885.6	0.0	0.0	B31.8	
5501	53018.4	0.0	2.004	1.670	94091.9	0.0	0.0	B31.8	
5501	53018.4	0.0	2.004	1.670	94091.9	0.0	0.0	B31.8	
5500	50411.0	0.0	2.004	1.670	91049.9	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5500	26845.3	0.0	1.000	1.000	67484.2	0.0	0.0	B31.8	
5510	26825.5	0.0	1.000	1.000	67464.4	0.0	0.0	B31.8	
5510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	18515.2	0.0	1.000	1.000	59154.2	0.0	0.0	B31.8	
5530	17719.2	0.0	1.000	1.000	58358.2	0.0	0.0	B31.8	
5530	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	20236.1	0.0	1.000	1.000	60875.1	0.0	0.0	B31.8	
5550	22253.0	0.0	1.000	1.000	62891.9	0.0	0.0	B31.8	
5550	22253.0	0.0	1.000	1.000	62891.9	0.0	0.0	B31.8	
5559	44619.3	0.0	2.004	1.670	85700.1	0.0	0.0	B31.8	
5559	44619.3	0.0	2.004	1.670	85700.1	0.0	0.0	B31.8	
5560	48199.0	0.0	2.004	1.670	89319.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5560	31053.3	0.0	1.000	1.000	69536.2	0.0	0.0	B31.8	
5570	31006.1	0.0	1.000	1.000	69489.2	0.0	0.0	B31.8	
5570	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	33543.6	0.0	1.683	1.683	72522.3	0.0	0.0	B31.8	
5590	15385.6	0.0	1.683	1.683	81982.5	0.0	0.0	B31.8	
5590	6524.8	-6498.0	1.000	1.000	15482.5	0.0	0.0	B31.3	
5595	19608.6	6498.0	1.000	1.000	24202.8	0.0	0.0	B31.3	
5595	19608.6	-6498.0	1.000	1.000	24202.8	0.0	0.0	B31.3	
5599	40448.1	14297.4	3.131	2.609	50060.1	0.0	0.0	B31.3	
5599	40448.1	-14297.4	3.131	2.609	50060.1	0.0	0.0	B31.3	
5600	32070.4	14677.5	3.131	2.609	43597.5	0.0	0.0	B31.3	
5600	11570.7	-14677.5	1.000	1.000	31673.8	0.0	0.0	B31.3	
5605	9079.4	14677.5	1.000	1.000	30847.8	0.0	0.0	B31.3	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5605	9079.4	-14677.5	1.000	1.000	30847.8	0.0	0.0	B31.3	
5609	16977.2	16839.3	3.131	2.609	37857.1	0.0	0.0	B31.3	
5609	16977.2	-16839.3	3.131	2.609	37857.2	0.0	0.0	B31.3	
5610	66816.4	10287.3	3.131	2.609	69960.3	0.0	0.0	B31.3	
5610	25565.0	-10287.3	1.000	1.000	32863.7	0.0	0.0	B31.3	
5620	128381.4	10606.7	6.043	7.724	130104.7	0.0	0.0	B31.3	
5620	14569.4	0.0	6.043	7.724	14720.4	0.0	0.0	B31.3	
2560	13029.9	-0.0	6.043	7.724	13181.0	0.0	0.0	B31.3	
350	7826.6	0.0	1.482	1.642	46309.9	0.0	0.0	B31.8	
400	3217.5	0.0	1.000	1.000	41700.8	0.0	0.0	B31.8	
400	3217.5	0.0	1.000	1.000	41700.8	0.0	0.0	B31.8	
410	165.1	0.0	1.000	1.000	38648.4	0.0	0.0	B31.8	
420	11270.2	0.0	1.482	1.642	50350.5	0.0	0.0	B31.8	
1294	4153.3	0.0	1.000	1.000	43233.6	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1294	4153.3	0.0	1.000	1.000	43233.6	0.0	0.0	B31.8	
1295	1825.2	0.0	1.000	1.000	40905.5	0.0	0.0	B31.8	
1295	1825.2	0.0	1.000	1.000	40902.3	0.0	0.0	B31.8	
1298	11708.2	0.0	1.000	1.000	50839.9	0.0	0.0	B31.8	
1298	17685.3	0.0	2.004	1.670	56816.9	0.0	0.0	B31.8	
1299	18574.8	0.0	2.004	1.670	57613.4	0.0	0.0	B31.8	
1299	18574.8	0.0	2.004	1.670	57613.4	0.0	0.0	B31.8	
1300	13172.2	0.0	2.004	1.670	52874.5	0.0	0.0	B31.8	
1300	7920.6	0.0	1.000	1.000	47623.0	0.0	0.0	B31.8	
1330	7846.5	0.0	1.000	1.000	47548.9	0.0	0.0	B31.8	
1330	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1340	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1340	5903.6	0.0	1.257	1.047	86213.0	0.0	0.0	B31.8	
1349	7547.4	0.0	1.257	1.047	87856.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1349	7547.4	0.0	1.257	1.047	87856.8	0.0	0.0	B31.8	
1350	9225.9	0.0	1.257	1.047	89745.2	0.0	0.0	B31.8	
1350	7653.1	0.0	1.000	1.000	88172.5	0.0	0.0	B31.8	
1355	12154.1	0.0	1.000	1.000	92673.4	0.0	0.0	B31.8	
1355	12154.1	0.0	1.000	1.000	92673.4	0.0	0.0	B31.8	
1360	14355.4	0.0	1.033	1.044	94874.8	0.0	0.0	B31.8	
410	165.1	0.0	1.000	1.000	38644.7	0.0	0.0	B31.8	
420	1904.3	0.0	1.482	1.642	40383.9	0.0	0.0	B31.8	
420	3385.9	0.0	1.482	1.642	41723.8	0.0	0.0	B31.8	
429	890.2	0.0	1.000	1.000	39228.1	0.0	0.0	B31.8	
429	890.2	0.0	1.000	1.000	39228.1	0.0	0.0	B31.8	
430	3812.3	0.0	1.000	1.000	42150.2	0.0	0.0	B31.8	
440	8724.2	0.0	1.482	1.642	47693.2	0.0	0.0	B31.8	
1989	3032.0	0.0	1.000	1.000	42001.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1989	3032.0	0.0	1.000	1.000	42001.0	0.0	0.0	B31.8	
1990	2514.6	0.0	1.000	1.000	41483.6	0.0	0.0	B31.8	
1990	2514.6	0.0	1.000	1.000	41481.9	0.0	0.0	B31.8	
1998	14542.9	0.0	1.000	1.000	53564.8	0.0	0.0	B31.8	
1998	21631.2	0.0	2.004	1.670	60653.0	0.0	0.0	B31.8	
1999	23670.4	0.0	2.004	1.670	62506.1	0.0	0.0	B31.8	
1999	23670.4	0.0	2.004	1.670	62506.1	0.0	0.0	B31.8	
2000	17877.2	0.0	2.004	1.670	57402.4	0.0	0.0	B31.8	
2000	10862.8	0.0	1.000	1.000	50388.0	0.0	0.0	B31.8	
2030	10784.5	0.0	1.000	1.000	50309.7	0.0	0.0	B31.8	
2030	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	10270.3	0.0	1.257	1.047	90483.4	0.0	0.0	B31.8	
2049	11215.8	0.0	1.257	1.047	91397.3	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2049	11215.8	0.0	1.257	1.047	91397.3	0.0	0.0	B31.8	
2050	11395.7	0.0	1.257	1.047	91830.5	0.0	0.0	B31.8	
2050	10694.3	0.0	1.000	1.000	91129.1	0.0	0.0	B31.8	
2060	12279.7	0.0	1.000	1.000	92714.4	0.0	0.0	B31.8	
2060	12279.7	0.0	1.000	1.000	92714.4	0.0	0.0	B31.8	
1950	11237.7	0.0	1.033	1.044	91672.5	0.0	0.0	B31.8	
430	3812.3	0.0	1.000	1.000	42165.6	0.0	0.0	B31.8	
440	2859.0	0.0	1.482	1.642	41212.3	0.0	0.0	B31.8	
440	4186.8	0.0	1.482	1.642	42682.6	0.0	0.0	B31.8	
449	357.7	0.0	1.000	1.000	38853.5	0.0	0.0	B31.8	
449	357.7	0.0	1.000	1.000	38853.5	0.0	0.0	B31.8	
450	2926.4	0.0	1.000	1.000	41422.3	0.0	0.0	B31.8	
18000	1559.8	0.0	1.482	1.642	40617.4	0.0	0.0	B31.8	
1044	2405.3	0.0	1.000	1.000	41462.9	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1044	2405.3	0.0	1.000	1.000	41462.9	0.0	0.0	B31.8	
1045	5248.4	0.0	1.000	1.000	44306.0	0.0	0.0	B31.8	
1045	5248.4	0.0	1.000	1.000	44304.6	0.0	0.0	B31.8	
1048	11301.1	0.0	1.000	1.000	50411.9	0.0	0.0	B31.8	
1048	16752.3	0.0	2.004	1.670	55863.1	0.0	0.0	B31.8	
1049	17841.2	0.0	2.004	1.670	56930.4	0.0	0.0	B31.8	
1049	17841.2	0.0	2.004	1.670	56930.4	0.0	0.0	B31.8	
1050	12725.3	0.0	2.004	1.670	52520.1	0.0	0.0	B31.8	
1050	7208.5	0.0	1.000	1.000	47003.3	0.0	0.0	B31.8	
1080	7152.5	0.0	1.000	1.000	46947.3	0.0	0.0	B31.8	
1080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	14287.5	0.0	1.257	1.047	94647.0	0.0	0.0	B31.8	
1099	15625.8	0.0	1.257	1.047	95855.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1099	15625.8	0.0	1.257	1.047	95855.7	0.0	0.0	B31.8	
1100	16019.8	0.0	1.257	1.047	96376.6	0.0	0.0	B31.8	
1100	15583.6	0.0	1.000	1.000	95940.5	0.0	0.0	B31.8	
1105	16433.4	0.0	1.000	1.000	96790.2	0.0	0.0	B31.8	
1105	16433.4	0.0	1.000	1.000	96790.2	0.0	0.0	B31.8	
1110	9263.6	0.0	1.033	1.044	89620.5	0.0	0.0	B31.8	
450	2926.4	0.0	1.000	1.000	41464.4	0.0	0.0	B31.8	
18000	3121.8	0.0	1.482	1.642	41659.7	0.0	0.0	B31.8	
18000	3289.0	0.0	1.482	1.642	42245.3	0.0	0.0	B31.8	
460	5250.4	0.0	1.000	1.000	44206.8	0.0	0.0	B31.8	
460	5250.4	0.0	1.000	1.000	44275.8	0.0	0.0	B31.8	
16000	2728.7	0.0	1.482	1.642	41754.0	0.0	0.0	B31.8	
16000	82.7	0.0	1.482	1.642	39788.5	0.0	0.0	B31.8	
469	37.1	0.0	1.000	1.000	39743.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
469	37.1	0.0	1.000	1.000	39743.0	0.0	0.0	B31.8	
470	0.0	0.0	1.000	1.000	39705.9	0.0	0.0	B31.8	
16000	9344.9	0.0	1.482	1.642	48678.6	0.0	0.0	B31.8	
489	3425.6	0.0	1.000	1.000	42759.3	0.0	0.0	B31.8	
489	3425.6	0.0	1.000	1.000	42759.3	0.0	0.0	B31.8	
490	7142.4	0.0	1.000	1.000	46476.0	0.0	0.0	B31.8	
490	7142.4	0.0	1.000	1.000	46471.7	0.0	0.0	B31.8	
509	9511.8	0.0	2.004	1.670	49071.5	0.0	0.0	B31.8	
509	9511.8	0.0	2.004	1.670	49071.5	0.0	0.0	B31.8	
510	10012.9	0.0	2.004	1.670	50199.8	0.0	0.0	B31.8	
510	5454.2	0.0	1.000	1.000	45641.1	0.0	0.0	B31.8	
540	5500.2	0.0	1.000	1.000	45687.2	0.0	0.0	B31.8	
540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
550	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
550	18911.5	0.0	1.257	1.047	99484.0	0.0	0.0	B31.8	
559	21281.5	0.0	1.257	1.047	101608.8	0.0	0.0	B31.8	
559	21281.5	0.0	1.257	1.047	101608.8	0.0	0.0	B31.8	
560	22866.8	0.0	1.257	1.047	103148.4	0.0	0.0	B31.8	
560	21958.6	0.0	1.000	1.000	102240.2	0.0	0.0	B31.8	
565	24373.6	0.0	1.000	1.000	104655.2	0.0	0.0	B31.8	
565	24373.6	0.0	1.000	1.000	104655.2	0.0	0.0	B31.8	
570	27476.1	0.0	1.033	1.044	107757.8	0.0	0.0	B31.8	
570	45740.5	0.0	1.033	1.044	125300.3	0.0	0.0	B31.8	
620	42212.3	0.0	1.000	1.000	121772.2	0.0	0.0	B31.8	
620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	45112.8	0.0	1.000	1.000	124672.7	0.0	0.0	B31.8	
635	44267.4	0.0	1.000	1.000	123827.3	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
635	44267.4	0.0	1.000	1.000	123827.3	0.0	0.0	B31.8	
14028	46638.6	0.0	1.000	1.000	126198.5	0.0	0.0	B31.8	
14028	49885.4	0.0	1.257	1.047	129445.3	0.0	0.0	B31.8	
14029	49429.0	0.0	1.257	1.047	129377.9	0.0	0.0	B31.8	
14029	49429.0	0.0	1.257	1.047	129377.9	0.0	0.0	B31.8	
14030	45775.8	0.0	1.257	1.047	126534.8	0.0	0.0	B31.8	
14030	32109.9	0.0	1.000	1.000	112869.0	0.0	0.0	B31.8	
14025	10393.4	0.0	1.000	1.000	91152.4	0.0	0.0	B31.8	
14025	10393.4	0.0	1.000	1.000	91152.4	0.0	0.0	B31.8	
14019	34712.3	0.0	1.257	1.047	115119.6	0.0	0.0	B31.8	
14019	34712.3	0.0	1.257	1.047	115119.6	0.0	0.0	B31.8	
14020	31724.2	0.0	1.257	1.047	111952.3	0.0	0.0	B31.8	
14020	26942.4	0.0	1.000	1.000	107170.5	0.0	0.0	B31.8	
14013	11881.8	0.0	1.000	1.000	92209.4	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14013	20535.6	0.0	1.257	1.047	100863.2	0.0	0.0	B31.8	
14014	22241.3	0.0	1.257	1.047	103466.1	0.0	0.0	B31.8	
14014	22241.3	0.0	1.257	1.047	103466.1	0.0	0.0	B31.8	
14015	23684.8	0.0	1.257	1.047	105460.5	0.0	0.0	B31.8	
14015	20375.0	0.0	1.000	1.000	102150.7	0.0	0.0	B31.8	
14008	21871.6	0.0	1.000	1.000	103647.3	0.0	0.0	B31.8	
14008	24983.9	0.0	1.257	1.047	106759.6	0.0	0.0	B31.8	
14009	26954.3	0.0	1.257	1.047	108470.0	0.0	0.0	B31.8	
14009	26954.3	0.0	1.257	1.047	108470.0	0.0	0.0	B31.8	
14010	30964.5	0.0	1.257	1.047	111723.5	0.0	0.0	B31.8	
14010	25557.9	0.0	1.000	1.000	106316.9	0.0	0.0	B31.8	
707	117463.8	0.0	2.521	3.028	198222.9	0.0	0.0	B31.8	
680	11316.6	0.0	1.000	1.000	99143.2	0.0	0.0	B31.8	
750	8911.1	0.0	1.000	1.000	96737.7	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
750	8911.1	0.0	1.000	1.000	96685.3	0.0	0.0	B31.8	
17000	20318.1	0.0	2.521	3.028	108092.3	0.0	0.0	B31.8	
17000	18513.3	0.0	2.521	3.028	106099.3	0.0	0.0	B31.8	
754	8406.4	0.0	1.000	1.000	95992.5	0.0	0.0	B31.8	
754	8406.4	0.0	1.000	1.000	95992.5	0.0	0.0	B31.8	
755	8303.1	0.0	1.000	1.000	95889.2	0.0	0.0	B31.8	
17000	154896.4	0.0	2.521	3.028	235458.8	0.0	0.0	B31.8	
4229	42865.9	0.0	1.000	1.000	123428.4	0.0	0.0	B31.8	
4229	42865.9	0.0	1.000	1.000	123428.4	0.0	0.0	B31.8	
4230	16823.2	0.0	1.000	1.000	97385.6	0.0	0.0	B31.8	
4230	16823.2	0.0	1.000	1.000	97382.8	0.0	0.0	B31.8	
17008	1177.6	0.0	1.000	1.000	81795.4	0.0	0.0	B31.8	
17008	8860.9	0.0	1.257	1.047	89478.6	0.0	0.0	B31.8	
17009	11130.7	0.0	1.257	1.047	92619.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17009	11130.7	0.0	1.257	1.047	92619.0	0.0	0.0	B31.8	
17010	12910.5	0.0	1.257	1.047	94768.7	0.0	0.0	B31.8	
17010	12870.7	0.0	1.000	1.000	94729.0	0.0	0.0	B31.8	
17018	13880.3	0.0	1.000	1.000	95738.5	0.0	0.0	B31.8	
17018	13917.1	0.0	1.257	1.047	95775.4	0.0	0.0	B31.8	
17019	12037.5	0.0	1.257	1.047	93592.2	0.0	0.0	B31.8	
17019	12037.5	0.0	1.257	1.047	93592.2	0.0	0.0	B31.8	
17020	7000.2	0.0	1.257	1.047	87731.9	0.0	0.0	B31.8	
17020	6535.1	0.0	1.000	1.000	87266.7	0.0	0.0	B31.8	
17025	2725.0	0.0	1.000	1.000	83456.6	0.0	0.0	B31.8	
17025	2725.0	0.0	1.000	1.000	83456.6	0.0	0.0	B31.8	
17029	9814.4	0.0	1.257	1.047	89685.5	0.0	0.0	B31.8	
17029	9814.4	0.0	1.257	1.047	89685.5	0.0	0.0	B31.8	
17030	12253.8	0.0	1.257	1.047	91731.1	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17030	12016.6	0.0	1.000	1.000	91493.9	0.0	0.0	B31.8	
1225	18788.4	0.0	1.000	1.000	98265.8	0.0	0.0	B31.8	
1225	18788.4	0.0	1.000	1.000	98265.8	0.0	0.0	B31.8	
1230	17197.5	0.0	1.000	1.000	96674.8	0.0	0.0	B31.8	
1230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1240	19539.4	0.0	1.000	1.000	99016.8	0.0	0.0	B31.8	
1110	19661.1	0.0	1.033	1.044	99138.5	0.0	0.0	B31.8	
1110	15410.4	0.0	1.033	1.044	94579.5	0.0	0.0	B31.8	
1248	13556.1	0.0	1.000	1.000	92725.1	0.0	0.0	B31.8	
1248	14361.4	0.0	1.257	1.047	93530.4	0.0	0.0	B31.8	
1249	12986.6	0.0	1.257	1.047	92261.8	0.0	0.0	B31.8	
1249	12986.6	0.0	1.257	1.047	92261.8	0.0	0.0	B31.8	
1250	9436.0	0.0	1.257	1.047	89653.1	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1250	9436.0	0.0	1.257	1.047	89653.1	0.0	0.0	B31.8	
17099	9305.0	0.0	1.257	1.047	88608.5	0.0	0.0	B31.8	
17099	9305.0	0.0	1.257	1.047	88608.5	0.0	0.0	B31.8	
17100	8706.2	0.0	1.257	1.047	87875.3	0.0	0.0	B31.8	
17100	8576.9	0.0	1.000	1.000	87746.0	0.0	0.0	B31.8	
17110	8548.2	0.0	1.000	1.000	87717.2	0.0	0.0	B31.8	
17110	8677.9	0.0	1.000	1.000	87933.4	0.0	0.0	B31.8	
1260	14055.5	0.0	1.000	1.000	83084.4	0.0	0.0	B31.8	
1260	13667.7	0.0	1.000	1.000	82568.4	0.0	0.0	B31.8	
1270	9442.2	0.0	1.000	1.000	78342.9	0.0	0.0	B31.8	
755	8303.1	0.0	1.000	1.000	95851.7	0.0	0.0	B31.8	
760	3705.9	0.0	1.000	1.000	91254.4	0.0	0.0	B31.8	
760	3705.9	0.0	1.000	1.000	91276.7	0.0	0.0	B31.8	
19000	8013.3	0.0	2.521	3.028	95584.2	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19000	8235.8	0.0	2.521	3.028	95920.4	0.0	0.0	B31.8	
769	3592.0	0.0	1.000	1.000	91276.6	0.0	0.0	B31.8	
769	3592.0	0.0	1.000	1.000	91276.6	0.0	0.0	B31.8	
770	3274.3	0.0	1.000	1.000	90958.9	0.0	0.0	B31.8	
19000	114681.7	0.0	2.521	3.028	195066.5	0.0	0.0	B31.8	
4299	34061.5	0.0	1.000	1.000	114446.4	0.0	0.0	B31.8	
4299	34061.5	0.0	1.000	1.000	114446.4	0.0	0.0	B31.8	
4300	17944.9	0.0	1.000	1.000	98329.7	0.0	0.0	B31.8	
4300	17944.9	0.0	1.000	1.000	98339.0	0.0	0.0	B31.8	
19009	11340.4	0.0	1.257	1.047	92493.2	0.0	0.0	B31.8	
19009	11340.4	0.0	1.257	1.047	92493.2	0.0	0.0	B31.8	
19010	11199.1	0.0	1.257	1.047	92748.4	0.0	0.0	B31.8	
19010	10851.5	0.0	1.000	1.000	92400.8	0.0	0.0	B31.8	
19018	6066.5	0.0	1.000	1.000	87615.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19018	6668.3	0.0	1.257	1.047	88217.6	0.0	0.0	B31.8	
19019	5439.3	0.0	1.257	1.047	86663.8	0.0	0.0	B31.8	
19019	5439.3	0.0	1.257	1.047	86663.8	0.0	0.0	B31.8	
19020	6040.7	0.0	1.257	1.047	86614.2	0.0	0.0	B31.8	
19020	4532.3	0.0	1.000	1.000	85105.8	0.0	0.0	B31.8	
19025	7713.6	0.0	1.000	1.000	88287.1	0.0	0.0	B31.8	
19025	7713.6	0.0	1.000	1.000	88287.1	0.0	0.0	B31.8	
19029	14869.8	0.0	1.257	1.047	94847.6	0.0	0.0	B31.8	
19029	14869.8	0.0	1.257	1.047	94847.6	0.0	0.0	B31.8	
19030	15925.2	0.0	1.257	1.047	95711.4	0.0	0.0	B31.8	
19030	15642.2	0.0	1.000	1.000	95428.4	0.0	0.0	B31.8	
1925	10919.1	0.0	1.000	1.000	90705.3	0.0	0.0	B31.8	
1925	10919.1	0.0	1.000	1.000	90705.3	0.0	0.0	B31.8	
1930	8558.6	0.0	1.000	1.000	88344.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1930	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	6477.3	0.0	1.000	1.000	86263.5	0.0	0.0	B31.8	
1950	5977.5	0.0	1.033	1.044	85763.8	0.0	0.0	B31.8	
1950	11567.6	0.0	1.033	1.044	90899.3	0.0	0.0	B31.8	
1958	8979.8	0.0	1.000	1.000	88311.5	0.0	0.0	B31.8	
1958	10757.8	0.0	1.257	1.047	90089.4	0.0	0.0	B31.8	
1959	9601.5	0.0	1.257	1.047	89003.0	0.0	0.0	B31.8	
1959	9601.5	0.0	1.257	1.047	89003.0	0.0	0.0	B31.8	
1960	4795.8	0.0	1.257	1.047	85029.0	0.0	0.0	B31.8	
1960	4795.8	0.0	1.257	1.047	85029.0	0.0	0.0	B31.8	
19099	4084.0	0.0	1.257	1.047	83513.9	0.0	0.0	B31.8	
19099	4084.0	0.0	1.257	1.047	83513.9	0.0	0.0	B31.8	
19100	4178.5	0.0	1.257	1.047	83510.2	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19100	3849.9	0.0	1.000	1.000	83181.6	0.0	0.0	B31.8	
19110	3825.3	0.0	1.000	1.000	83157.0	0.0	0.0	B31.8	
19110	4155.9	0.0	1.000	1.000	83487.6	0.0	0.0	B31.8	
1970	6633.5	0.0	1.000	1.000	75780.3	0.0	0.0	B31.8	
1970	5770.7	0.0	1.000	1.000	74917.4	0.0	0.0	B31.8	
1980	6771.3	0.0	1.000	1.000	75918.0	0.0	0.0	B31.8	
770	3274.3	0.0	1.000	1.000	90999.8	0.0	0.0	B31.8	
780	488.1	0.0	1.000	1.000	88213.7	0.0	0.0	B31.8	
780	488.1	0.0	1.000	1.000	88310.7	0.0	0.0	B31.8	
13000	3624.4	0.0	2.521	3.028	91447.0	0.0	0.0	B31.8	
13000	3363.0	0.0	2.521	3.028	91589.2	0.0	0.0	B31.8	
789	1396.1	0.0	1.000	1.000	89622.3	0.0	0.0	B31.8	
789	1396.1	0.0	1.000	1.000	89622.3	0.0	0.0	B31.8	
790	1225.4	0.0	1.000	1.000	89451.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
13000	152670.6	0.0	2.521	3.028	233039.4	0.0	0.0	B31.8	
4399	42496.4	0.0	1.000	1.000	122865.2	0.0	0.0	B31.8	
4399	42496.4	0.0	1.000	1.000	122865.2	0.0	0.0	B31.8	
4400	16912.5	0.0	1.000	1.000	97281.3	0.0	0.0	B31.8	
4400	16912.5	0.0	1.000	1.000	97291.9	0.0	0.0	B31.8	
13008	5888.6	0.0	1.000	1.000	86326.1	0.0	0.0	B31.8	
13008	14986.3	0.0	1.257	1.047	95423.8	0.0	0.0	B31.8	
13009	14390.2	0.0	1.257	1.047	95516.1	0.0	0.0	B31.8	
13009	14390.2	0.0	1.257	1.047	95516.1	0.0	0.0	B31.8	
13010	13980.7	0.0	1.257	1.047	95506.7	0.0	0.0	B31.8	
13010	12783.0	0.0	1.000	1.000	94308.9	0.0	0.0	B31.8	
13018	7012.6	0.0	1.000	1.000	88538.6	0.0	0.0	B31.8	
13018	9013.0	0.0	1.257	1.047	90539.0	0.0	0.0	B31.8	
13019	9888.0	0.0	1.257	1.047	91017.5	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
13019	9888.0	0.0	1.257	1.047	91017.5	0.0	0.0	B31.8	
13020	12908.8	0.0	1.257	1.047	93371.3	0.0	0.0	B31.8	
13020	11523.2	0.0	1.000	1.000	91985.7	0.0	0.0	B31.8	
13025	14927.2	0.0	1.000	1.000	95389.6	0.0	0.0	B31.8	
13025	14927.2	0.0	1.000	1.000	95389.6	0.0	0.0	B31.8	
13029	21759.3	0.0	1.257	1.047	101675.1	0.0	0.0	B31.8	
13029	21759.3	0.0	1.257	1.047	101675.1	0.0	0.0	B31.8	
13030	22169.2	0.0	1.257	1.047	101978.8	0.0	0.0	B31.8	
13030	21589.5	0.0	1.000	1.000	101399.1	0.0	0.0	B31.8	
1425	7869.9	0.0	1.000	1.000	87679.5	0.0	0.0	B31.8	
1425	7869.9	0.0	1.000	1.000	87679.5	0.0	0.0	B31.8	
1430	5915.5	0.0	1.000	1.000	85725.1	0.0	0.0	B31.8	
1430	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1440	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1440	4404.2	0.0	1.000	1.000	84213.8	0.0	0.0	B31.8	
1360	6129.9	0.0	1.033	1.044	85939.5	0.0	0.0	B31.8	
1360	8261.7	0.0	1.033	1.044	87712.9	0.0	0.0	B31.8	
1448	6829.4	0.0	1.000	1.000	86280.6	0.0	0.0	B31.8	
1448	9121.3	0.0	1.257	1.047	88572.5	0.0	0.0	B31.8	
1449	9161.4	0.0	1.257	1.047	88615.5	0.0	0.0	B31.8	
1449	9161.4	0.0	1.257	1.047	88615.5	0.0	0.0	B31.8	
1450	5782.4	0.0	1.257	1.047	85970.5	0.0	0.0	B31.8	
1450	4204.3	0.0	1.000	1.000	84392.4	0.0	0.0	B31.8	
15098	4140.5	0.0	1.000	1.000	84328.9	0.0	0.0	B31.8	
15098	5736.2	0.0	1.257	1.047	85924.5	0.0	0.0	B31.8	
15099	5846.9	0.0	1.257	1.047	85329.6	0.0	0.0	B31.8	
15099	5846.9	0.0	1.257	1.047	85329.6	0.0	0.0	B31.8	
15100	7168.1	0.0	1.257	1.047	86619.3	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
15100	7035.5	0.0	1.000	1.000	86486.7	0.0	0.0	B31.8	
15110	7043.5	0.0	1.000	1.000	86494.7	0.0	0.0	B31.8	
15110	7176.0	0.0	1.000	1.000	86714.5	0.0	0.0	B31.8	
1460	15525.3	0.0	1.000	1.000	84982.6	0.0	0.0	B31.8	
1460	15202.7	0.0	1.000	1.000	84530.4	0.0	0.0	B31.8	
1470	19699.2	0.0	1.000	1.000	89026.8	0.0	0.0	B31.8	
790	1225.4	0.0	1.000	1.000	89527.4	0.0	0.0	B31.8	
800	976.4	0.0	1.000	1.000	89278.3	0.0	0.0	B31.8	
800	976.4	0.0	1.000	1.000	89466.5	0.0	0.0	B31.8	
810	2408.8	0.0	1.000	1.000	90898.9	0.0	0.0	B31.8	
810	2408.8	0.0	1.000	1.000	91201.8	0.0	0.0	B31.8	
820	4665.2	0.0	1.000	1.000	93458.2	0.0	0.0	B31.8	
820	4665.2	0.0	1.000	1.000	93643.8	0.0	0.0	B31.8	
12000	9391.4	0.0	2.521	3.028	98370.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12000	12.1	0.0	2.521	3.028	89718.6	0.0	0.0	B31.8	
829	2.9	0.0	1.000	1.000	89709.4	0.0	0.0	B31.8	
829	2.9	0.0	1.000	1.000	89709.4	0.0	0.0	B31.8	
830	0.0	0.0	1.000	1.000	89706.6	0.0	0.0	B31.8	
12000	245630.3	0.0	2.521	3.028	325909.1	0.0	0.0	B31.8	
831	65917.4	0.0	1.000	1.000	146196.2	0.0	0.0	B31.8	
831	65917.4	0.0	1.000	1.000	146196.2	0.0	0.0	B31.8	
832	16690.8	0.0	1.000	1.000	96969.6	0.0	0.0	B31.8	
832	16690.8	0.0	1.000	1.000	96982.5	0.0	0.0	B31.8	
12008	10703.7	0.0	1.000	1.000	91053.5	0.0	0.0	B31.8	
12008	23177.2	0.0	1.257	1.047	103527.1	0.0	0.0	B31.8	
12009	22544.4	0.0	1.257	1.047	103479.0	0.0	0.0	B31.8	
12009	22544.4	0.0	1.257	1.047	103479.0	0.0	0.0	B31.8	
12010	20920.4	0.0	1.257	1.047	102263.4	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12010	17354.1	0.0	1.000	1.000	98697.1	0.0	0.0	B31.8	
12015	17321.9	0.0	1.000	1.000	98664.8	0.0	0.0	B31.8	
12015	17321.9	0.0	1.000	1.000	98664.8	0.0	0.0	B31.8	
12017	9007.0	0.0	1.000	1.000	90350.0	0.0	0.0	B31.8	
12017	9007.0	0.0	1.000	1.000	90350.0	0.0	0.0	B31.8	
12018	20768.7	0.0	1.000	1.000	102111.7	0.0	0.0	B31.8	
12018	23829.3	0.0	1.257	1.047	105172.3	0.0	0.0	B31.8	
12019	26658.2	0.0	1.257	1.047	107458.5	0.0	0.0	B31.8	
12019	26658.2	0.0	1.257	1.047	107458.5	0.0	0.0	B31.8	
12020	30139.5	0.0	1.257	1.047	110319.4	0.0	0.0	B31.8	
12020	28552.9	0.0	1.000	1.000	108732.9	0.0	0.0	B31.8	
12025	31245.1	0.0	1.000	1.000	111425.1	0.0	0.0	B31.8	
12025	31245.1	0.0	1.000	1.000	111425.1	0.0	0.0	B31.8	
12029	36289.1	0.0	1.257	1.047	116134.5	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12029	36289.1	0.0	1.257	1.047	116134.5	0.0	0.0	B31.8	
12030	34946.1	0.0	1.257	1.047	114938.7	0.0	0.0	B31.8	
12030	33791.7	0.0	1.000	1.000	113784.3	0.0	0.0	B31.8	
885	1160.1	0.0	1.000	1.000	81152.7	0.0	0.0	B31.8	
885	1160.1	0.0	1.000	1.000	81152.7	0.0	0.0	B31.8	
890	5250.8	0.0	1.000	1.000	85243.4	0.0	0.0	B31.8	
890	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	22288.9	0.0	1.000	1.000	102281.4	0.0	0.0	B31.8	
910	25656.2	0.0	1.033	1.044	105648.8	0.0	0.0	B31.8	
910	10218.8	0.0	1.033	1.044	89407.4	0.0	0.0	B31.8	
918	11401.9	0.0	1.000	1.000	90590.5	0.0	0.0	B31.8	
918	14034.4	0.0	1.257	1.047	93223.0	0.0	0.0	B31.8	
919	15602.4	0.0	1.257	1.047	94749.2	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
919	15602.4	0.0	1.257	1.047	94749.2	0.0	0.0	B31.8	
920	13712.0	0.0	1.257	1.047	93728.0	0.0	0.0	B31.8	
920	13712.0	0.0	1.257	1.047	93728.0	0.0	0.0	B31.8	
15009	14678.4	0.0	1.257	1.047	93853.5	0.0	0.0	B31.8	
15009	14678.4	0.0	1.257	1.047	93853.5	0.0	0.0	B31.8	
15010	17464.8	0.0	1.257	1.047	96653.4	0.0	0.0	B31.8	
15010	17464.7	0.0	1.000	1.000	96653.3	0.0	0.0	B31.8	
15020	17496.7	0.0	1.000	1.000	96685.3	0.0	0.0	B31.8	
15020	17496.8	0.0	1.000	1.000	96804.3	0.0	0.0	B31.8	
930	38666.7	0.0	1.000	1.000	107774.2	0.0	0.0	B31.8	
930	38663.0	0.0	1.000	1.000	107593.1	0.0	0.0	B31.8	
940	46772.1	0.0	1.000	1.000	115702.3	0.0	0.0	B31.8	
680	11316.6	0.0	1.000	1.000	99259.1	0.0	0.0	B31.8	
14000	15570.0	0.0	1.000	1.000	103512.6	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14000	15570.0	0.0	1.000	1.000	103543.6	0.0	0.0	B31.8	
690	19546.0	0.0	1.000	1.000	107519.6	0.0	0.0	B31.8	
690	19546.0	0.0	1.000	1.000	107552.5	0.0	0.0	B31.8	
691	26946.4	0.0	1.000	1.000	114952.9	0.0	0.0	B31.8	
691	28026.2	0.0	1.269	1.057	116070.5	0.0	0.0	B31.8	
692	30553.1	0.0	1.269	1.057	118153.1	0.0	0.0	B31.8	
692	30553.1	0.0	1.269	1.057	118165.9	0.0	0.0	B31.8	
700	26118.2	0.0	1.269	1.057	114314.4	0.0	0.0	B31.8	
700	25768.8	0.0	1.000	1.000	113950.4	0.0	0.0	B31.8	
704	23889.8	0.0	1.000	1.000	112071.3	0.0	0.0	B31.8	
704	23889.8	0.0	1.000	1.000	112071.3	0.0	0.0	B31.8	
705	18470.9	0.0	1.000	1.000	106652.5	0.0	0.0	B31.8	
705	18470.9	0.0	1.000	1.000	106646.0	0.0	0.0	B31.8	
740	16945.5	0.0	1.000	1.000	105136.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
740	16945.5	0.0	1.000	1.000	105136.7	0.0	0.0	B31.8	
745	8241.5	0.0	1.000	1.000	96608.9	0.0	0.0	B31.8	
745	8241.5	0.0	1.000	1.000	96608.9	0.0	0.0	B31.8	
707	23198.2	0.0	2.521	3.028	111597.6	0.0	0.0	B31.8	
707	24310.4	0.0	2.521	3.028	112695.9	0.0	0.0	B31.8	
709	36242.3	0.0	1.269	1.057	124492.2	0.0	0.0	B31.8	
709	36242.3	0.0	1.269	1.057	124492.2	0.0	0.0	B31.8	
710	35830.7	0.0	1.269	1.057	124531.4	0.0	0.0	B31.8	
710	19977.0	0.0	1.000	1.000	108677.7	0.0	0.0	B31.8	
719	31231.2	0.0	1.269	1.057	120860.1	0.0	0.0	B31.8	
719	31231.2	0.0	1.269	1.057	120860.1	0.0	0.0	B31.8	
720	26967.8	0.0	1.269	1.057	117513.7	0.0	0.0	B31.8	
720	24662.2	0.0	1.000	1.000	115208.2	0.0	0.0	B31.8	
730	24602.2	0.0	1.000	1.000	115147.4	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
730	24602.2	0.0	1.000	1.000	115147.4	0.0	0.0	B31.8	
4000	24414.6	0.0	1.096	1.128	114920.1	0.0	0.0	B31.8	
4000	15850.2	0.0	1.096	1.128	105476.1	0.0	0.0	B31.8	
4100	13488.9	0.0	1.000	1.000	103114.9	0.0	0.0	B31.8	
4100	13488.9	0.0	1.000	1.000	103114.9	0.0	0.0	B31.8	
4110	12622.8	0.0	1.000	1.000	102248.8	0.0	0.0	B31.8	
4110	12622.8	0.0	1.000	1.000	102248.8	0.0	0.0	B31.8	
4120	11469.0	0.0	1.000	1.000	101094.9	0.0	0.0	B31.8	
4120	11469.0	0.0	1.000	1.000	101094.9	0.0	0.0	B31.8	
4130	14283.0	0.0	1.000	1.000	103909.0	0.0	0.0	B31.8	
4130	14283.0	0.0	1.000	1.000	103909.0	0.0	0.0	B31.8	
4140	12526.1	0.0	1.096	1.128	102152.0	0.0	0.0	B31.8	
4140	12540.8	0.0	1.096	1.128	102138.5	0.0	0.0	B31.8	
7199	12133.4	0.0	1.269	1.057	101804.1	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7199	12133.4	0.0	1.269	1.057	101804.1	0.0	0.0	B31.8	
7200	11909.9	0.0	1.269	1.057	101610.1	0.0	0.0	B31.8	
7200	11895.2	0.0	1.000	1.000	101595.3	0.0	0.0	B31.8	
7210	10439.7	0.0	1.000	1.000	100139.8	0.0	0.0	B31.8	
7210	10439.7	0.0	1.000	1.000	100139.8	0.0	0.0	B31.8	
7220	8042.4	0.0	1.000	1.000	97742.5	0.0	0.0	B31.8	
7220	8042.4	0.0	1.000	1.000	97742.5	0.0	0.0	B31.8	
7230	4821.5	0.0	1.000	1.000	94521.6	0.0	0.0	B31.8	
7230	4821.5	0.0	1.000	1.000	94521.6	0.0	0.0	B31.8	
7240	1100.2	0.0	1.096	1.128	90800.4	0.0	0.0	B31.8	
7240	3179.8	0.0	1.096	1.128	92464.0	0.0	0.0	B31.8	
7600	2301.4	0.0	1.000	1.000	91585.6	0.0	0.0	B31.8	
7600	2306.4	0.0	1.000	1.000	91660.3	0.0	0.0	B31.8	
7610	6888.5	0.0	1.000	1.000	95946.4	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7610	6881.6	0.0	1.000	1.000	95813.7	0.0	0.0	B31.8	
7615	8626.3	0.0	1.000	1.000	97558.5	0.0	0.0	B31.8	
7615	8631.8	0.0	1.000	1.000	97490.8	0.0	0.0	B31.8	
7620	12703.2	0.0	1.000	1.000	99736.2	0.0	0.0	B31.8	
7620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	11515.6	0.0	1.000	1.000	98655.9	0.0	0.0	B31.8	
7660	13952.8	0.0	1.000	1.000	101093.2	0.0	0.0	B31.8	
7660	13952.8	0.0	1.000	1.000	101093.2	0.0	0.0	B31.8	
7670	19951.2	0.0	1.000	1.000	107091.6	0.0	0.0	B31.8	
7670	19951.2	0.0	1.000	1.000	107091.6	0.0	0.0	B31.8	
7679	17645.6	0.0	1.257	1.048	105070.4	0.0	0.0	B31.8	
7679	17645.6	0.0	1.257	1.048	105070.4	0.0	0.0	B31.8	
7680	12272.2	0.0	1.257	1.048	100473.3	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7680	12272.1	0.0	1.000	1.000	100473.1	0.0	0.0	B31.8	
7690	44519.4	0.0	1.000	1.000	132720.5	0.0	0.0	B31.8	
7690	44519.4	0.0	1.000	1.000	132720.5	0.0	0.0	B31.8	
7699	54787.7	0.0	1.257	1.048	142212.5	0.0	0.0	B31.8	
7699	54787.7	0.0	1.257	1.048	142212.5	0.0	0.0	B31.8	
7700	56810.9	0.0	1.257	1.048	143951.3	0.0	0.0	B31.8	
7700	56810.9	0.0	1.000	1.000	143951.3	0.0	0.0	B31.8	
7708	51747.2	0.0	1.000	1.000	138887.5	0.0	0.0	B31.8	
7708	51747.2	0.0	1.257	1.048	138887.5	0.0	0.0	B31.8	
7709	49092.0	0.0	1.257	1.048	136606.5	0.0	0.0	B31.8	
7709	49092.0	0.0	1.257	1.048	136606.5	0.0	0.0	B31.8	
7710	43464.6	0.0	1.257	1.048	131792.5	0.0	0.0	B31.8	
7710	43464.3	0.0	1.000	1.000	131792.2	0.0	0.0	B31.8	
7720	38589.0	0.0	1.000	1.000	126916.9	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7720	38589.0	0.0	1.000	1.000	126916.9	0.0	0.0	B31.8	
7728	18180.2	0.0	1.000	1.000	106508.2	0.0	0.0	B31.8	
7728	18181.0	0.0	1.257	1.048	106508.9	0.0	0.0	B31.8	
7729	23845.1	0.0	1.257	1.048	111359.6	0.0	0.0	B31.8	
7729	23845.1	0.0	1.257	1.048	111359.6	0.0	0.0	B31.8	
7730	26467.2	0.0	1.257	1.048	113607.6	0.0	0.0	B31.8	
7730	26467.2	0.0	1.000	1.000	113607.6	0.0	0.0	B31.8	
7740	30095.6	0.0	1.000	1.000	117236.0	0.0	0.0	B31.8	
7740	30095.6	0.0	1.000	1.000	117236.0	0.0	0.0	B31.8	
7750	32115.9	0.0	1.000	1.000	119256.3	0.0	0.0	B31.8	
7750	32115.9	0.0	1.000	1.000	119256.3	0.0	0.0	B31.8	
7760	22177.1	0.0	1.000	1.000	109317.5	0.0	0.0	B31.8	
7760	22177.1	0.0	1.000	1.000	109317.5	0.0	0.0	B31.8	
7770	20925.5	0.0	1.000	1.000	108065.9	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7770	20925.5	0.0	1.000	1.000	108065.9	0.0	0.0	B31.8	
7780	12992.9	0.0	1.000	1.000	100133.2	0.0	0.0	B31.8	
7780	12992.9	0.0	1.000	1.000	100133.2	0.0	0.0	B31.8	
7790	12098.9	0.0	1.000	1.000	99239.3	0.0	0.0	B31.8	
7790	12098.9	0.0	1.000	1.000	99239.3	0.0	0.0	B31.8	
7800	2751.0	0.0	1.000	1.000	89891.4	0.0	0.0	B31.8	
7800	2751.0	0.0	1.000	1.000	89891.4	0.0	0.0	B31.8	
7810	8433.7	0.0	1.000	1.000	95574.1	0.0	0.0	B31.8	
7810	8433.7	0.0	1.000	1.000	96698.2	0.0	0.0	B31.8	
7820	4548.9	0.0	1.000	1.000	92813.4	0.0	0.0	B31.8	
7820	4548.9	0.0	1.000	1.000	92813.4	0.0	0.0	B31.8	
7830	2008.6	0.0	1.000	1.000	90273.1	0.0	0.0	B31.8	
7830	2008.6	0.0	1.000	1.000	90273.1	0.0	0.0	B31.8	
7840	1847.6	0.0	1.000	1.000	90112.1	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7840	1847.6	0.0	1.000	1.000	90112.1	0.0	0.0	B31.8	
7850	723.3	0.0	1.000	1.000	88987.8	0.0	0.0	B31.8	
7850	723.3	0.0	1.000	1.000	88987.8	0.0	0.0	B31.8	
7860	1344.9	0.0	1.000	1.000	89609.4	0.0	0.0	B31.8	
7860	1344.9	0.0	1.000	1.000	89609.4	0.0	0.0	B31.8	
7870	2474.6	0.0	1.000	1.000	90739.2	0.0	0.0	B31.8	
7870	2474.6	0.0	1.000	1.000	90739.2	0.0	0.0	B31.8	
7880	42.7	0.0	1.000	1.000	88307.2	0.0	0.0	B31.8	
7880	42.7	0.0	1.000	1.000	88307.2	0.0	0.0	B31.8	
7890	0.0	0.0	1.000	1.000	88264.5	0.0	0.0	B31.8	
7240	3521.4	0.0	1.096	1.128	92896.1	0.0	0.0	B31.8	
7250	4060.8	0.0	1.000	1.000	93435.4	0.0	0.0	B31.8	
7250	4061.0	0.0	1.000	1.000	93406.7	0.0	0.0	B31.8	
7260	10156.4	0.0	1.000	1.000	99200.6	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7260	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	7292.3	0.0	1.000	1.000	96377.2	0.0	0.0	B31.8	
7280	6937.2	0.0	1.000	1.000	96022.1	0.0	0.0	B31.8	
7280	6937.2	0.0	1.000	1.000	96022.1	0.0	0.0	B31.8	
7290	6473.4	0.0	1.000	1.000	95558.2	0.0	0.0	B31.8	
7290	6473.4	0.0	1.000	1.000	95558.2	0.0	0.0	B31.8	
7295	5757.4	0.0	1.000	1.000	94842.3	0.0	0.0	B31.8	
7295	5757.4	0.0	1.000	1.000	94842.3	0.0	0.0	B31.8	
7300	5798.2	0.0	1.000	1.000	94883.0	0.0	0.0	B31.8	
7300	5798.2	0.0	1.000	1.000	94883.0	0.0	0.0	B31.8	
7320	5303.0	0.0	1.000	1.000	94387.9	0.0	0.0	B31.8	
7320	5303.0	0.0	1.000	1.000	94387.9	0.0	0.0	B31.8	
7330	4671.2	0.0	1.000	1.000	93756.1	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7330	4671.2	0.0	1.000	1.000	93070.8	0.0	0.0	B31.8	
7340	1621.6	0.0	1.000	1.000	90021.1	0.0	0.0	B31.8	
7340	1621.6	0.0	1.000	1.000	90021.1	0.0	0.0	B31.8	
7350	5287.3	0.0	1.000	1.000	93686.8	0.0	0.0	B31.8	
7350	5287.3	0.0	1.000	1.000	93686.8	0.0	0.0	B31.8	
7370	6224.7	0.0	1.000	1.000	94624.3	0.0	0.0	B31.8	
7370	6224.7	0.0	1.000	1.000	94624.3	0.0	0.0	B31.8	
7373	7220.1	0.0	1.000	1.000	95619.6	0.0	0.0	B31.8	
7373	7220.1	0.0	1.000	1.000	95619.6	0.0	0.0	B31.8	
7376	15838.7	0.0	1.000	1.000	104238.2	0.0	0.0	B31.8	
7376	15838.7	0.0	1.000	1.000	104238.2	0.0	0.0	B31.8	
7380	16933.6	0.0	1.000	1.000	105333.1	0.0	0.0	B31.8	
7380	16933.6	0.0	1.000	1.000	105333.1	0.0	0.0	B31.8	
7400	28783.2	0.0	1.000	1.000	117182.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7400	28783.2	0.0	1.000	1.000	117182.7	0.0	0.0	B31.8	
7409	25939.1	0.0	1.268	1.057	114693.3	0.0	0.0	B31.8	
7409	25939.1	0.0	1.268	1.057	114693.3	0.0	0.0	B31.8	
7410	19774.6	0.0	1.268	1.057	109415.3	0.0	0.0	B31.8	
7410	19772.1	0.0	1.000	1.000	109412.9	0.0	0.0	B31.8	
7415	29354.0	0.0	1.000	1.000	118994.8	0.0	0.0	B31.8	
7415	29354.0	0.0	1.000	1.000	118994.8	0.0	0.0	B31.8	
7419	38093.4	0.0	1.268	1.057	126847.7	0.0	0.0	B31.8	
7419	38093.4	0.0	1.268	1.057	126847.7	0.0	0.0	B31.8	
7420	40605.3	0.0	1.268	1.057	129004.9	0.0	0.0	B31.8	
7420	40605.3	0.0	1.000	1.000	129004.9	0.0	0.0	B31.8	
7430	40437.7	0.0	1.000	1.000	128837.2	0.0	0.0	B31.8	
7430	40437.7	0.0	1.000	1.000	128837.2	0.0	0.0	B31.8	
7438	39211.3	0.0	1.000	1.000	127610.8	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7438	39211.3	0.0	1.268	1.057	127610.8	0.0	0.0	B31.8	
7439	36487.3	0.0	1.268	1.057	125271.7	0.0	0.0	B31.8	
7439	36487.3	0.0	1.268	1.057	125271.7	0.0	0.0	B31.8	
7440	30318.9	0.0	1.268	1.057	120002.3	0.0	0.0	B31.8	
7440	30317.7	0.0	1.000	1.000	120001.0	0.0	0.0	B31.8	
7445	27673.2	0.0	1.000	1.000	117356.5	0.0	0.0	B31.8	
7445	27673.2	0.0	1.000	1.000	117356.5	0.0	0.0	B31.8	
7449	27717.9	0.0	1.268	1.057	116502.3	0.0	0.0	B31.8	
7449	27717.9	0.0	1.268	1.057	116502.3	0.0	0.0	B31.8	
7450	30416.5	0.0	1.268	1.057	118816.0	0.0	0.0	B31.8	
7450	30416.5	0.0	1.000	1.000	118816.0	0.0	0.0	B31.8	
7460	31630.1	0.0	1.000	1.000	120029.6	0.0	0.0	B31.8	
7460	31630.1	0.0	1.000	1.000	120029.6	0.0	0.0	B31.8	
7480	15442.7	0.0	1.000	1.000	103842.3	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7480	15442.7	0.0	1.000	1.000	105104.8	0.0	0.0	B31.8	
7482	13678.4	0.0	1.000	1.000	103340.4	0.0	0.0	B31.8	
7482	13678.4	0.0	1.000	1.000	103340.4	0.0	0.0	B31.8	
7485	1714.5	0.0	1.000	1.000	91376.5	0.0	0.0	B31.8	
7485	1714.5	0.0	1.000	1.000	91376.5	0.0	0.0	B31.8	
7490	33.7	0.0	1.000	1.000	89695.7	0.0	0.0	B31.8	
7490	33.7	0.0	1.000	1.000	89695.7	0.0	0.0	B31.8	
7500	0.0	0.0	1.000	1.000	89662.0	0.0	0.0	B31.8	
4140	205.9	0.0	1.096	1.128	89922.3	0.0	0.0	B31.8	
4150	0.0	0.0	1.000	1.000	89716.4	0.0	0.0	B31.8	
4000	31074.6	0.0	1.096	1.128	119948.1	0.0	0.0	B31.8	
4005	27505.5	0.0	1.000	1.000	116379.0	0.0	0.0	B31.8	
4005	27505.5	0.0	1.000	1.000	116379.0	0.0	0.0	B31.8	
4010	15418.2	0.0	1.000	1.000	104291.7	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
4010	15418.2	0.0	1.000	1.000	104291.7	0.0	0.0	B31.8	
4020	4672.4	0.0	1.000	1.000	93545.9	0.0	0.0	B31.8	
4020	4672.4	0.0	1.000	1.000	93545.9	0.0	0.0	B31.8	
4030	6321.0	0.0	1.000	1.000	95194.5	0.0	0.0	B31.8	
4030	6321.0	0.0	1.000	1.000	95194.5	0.0	0.0	B31.8	
4040	3948.7	0.0	1.000	1.000	92822.2	0.0	0.0	B31.8	
4040	3948.7	0.0	1.000	1.000	92822.2	0.0	0.0	B31.8	
4050	3195.0	0.0	1.000	1.000	92068.5	0.0	0.0	B31.8	
4050	3195.0	0.0	1.000	1.000	92903.1	0.0	0.0	B31.8	
7000	1514.0	0.0	1.000	1.000	91222.0	0.0	0.0	B31.8	
7000	1514.0	0.0	1.000	1.000	91222.0	0.0	0.0	B31.8	
7010	6242.7	0.0	1.000	1.000	95950.7	0.0	0.0	B31.8	
7010	6242.7	0.0	1.000	1.000	95950.7	0.0	0.0	B31.8	
7032	1527.0	0.0	1.000	1.000	91235.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7032	1527.2	0.0	1.269	1.057	91235.2	0.0	0.0	B31.8	
7031	1495.4	0.0	1.269	1.057	91205.9	0.0	0.0	B31.8	
7031	1495.4	0.0	1.269	1.057	91205.9	0.0	0.0	B31.8	
7030	1544.2	0.0	1.269	1.057	91260.6	0.0	0.0	B31.8	
7030	1544.2	0.0	1.000	1.000	91260.6	0.0	0.0	B31.8	
7040	7161.3	0.0	1.000	1.000	96877.7	0.0	0.0	B31.8	
7040	7161.3	0.0	1.000	1.000	96877.7	0.0	0.0	B31.8	
7050	3249.2	0.0	1.000	1.000	92965.6	0.0	0.0	B31.8	
7050	3249.2	0.0	1.000	1.000	92965.6	0.0	0.0	B31.8	
7060	1286.5	0.0	1.000	1.000	91002.9	0.0	0.0	B31.8	
7060	1286.5	0.0	1.000	1.000	91002.9	0.0	0.0	B31.8	
7070	1259.5	0.0	1.000	1.000	90975.8	0.0	0.0	B31.8	
7070	1259.5	0.0	1.000	1.000	90975.8	0.0	0.0	B31.8	
7080	3226.6	0.0	1.000	1.000	92942.9	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7080	3226.6	0.0	1.000	1.000	92942.9	0.0	0.0	B31.8	
7090	334.1	0.0	1.000	1.000	90050.5	0.0	0.0	B31.8	
7090	334.1	0.0	1.000	1.000	90050.5	0.0	0.0	B31.8	
7100	11.4	0.0	1.000	1.000	89727.8	0.0	0.0	B31.8	
7100	11.4	0.0	1.000	1.000	89727.8	0.0	0.0	B31.8	
7110	0.0	0.0	1.000	1.000	89716.4	0.0	0.0	B31.8	
570	25252.1	0.0	1.033	1.044	104716.7	0.0	0.0	B31.8	
578	20444.0	0.0	1.000	1.000	99908.6	0.0	0.0	B31.8	
578	20608.0	0.0	1.257	1.047	100072.5	0.0	0.0	B31.8	
579	19318.3	0.0	1.257	1.047	98757.3	0.0	0.0	B31.8	
579	19318.3	0.0	1.257	1.047	98757.3	0.0	0.0	B31.8	
580	17671.9	0.0	1.257	1.047	97825.1	0.0	0.0	B31.8	
580	17671.9	0.0	1.257	1.047	97825.1	0.0	0.0	B31.8	
16009	17260.2	0.0	1.257	1.047	96727.5	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
16009	17260.2	0.0	1.257	1.047	96727.5	0.0	0.0	B31.8	
16010	15960.2	0.0	1.257	1.047	95424.7	0.0	0.0	B31.8	
16010	15908.8	0.0	1.000	1.000	95373.3	0.0	0.0	B31.8	
16020	15884.0	0.0	1.000	1.000	95348.5	0.0	0.0	B31.8	
16020	15935.5	0.0	1.000	1.000	95492.9	0.0	0.0	B31.8	
590	29629.5	0.0	1.000	1.000	99115.4	0.0	0.0	B31.8	
590	29543.3	0.0	1.000	1.000	98891.2	0.0	0.0	B31.8	
600	26185.6	0.0	1.000	1.000	95533.5	0.0	0.0	B31.8	
350	9517.6	0.0	1.482	1.642	48458.3	0.0	0.0	B31.8	
15000	10380.8	0.0	1.482	1.642	49321.6	0.0	0.0	B31.8	
15000	83.9	0.0	1.482	1.642	39790.5	0.0	0.0	B31.8	
379	37.3	0.0	1.000	1.000	39743.9	0.0	0.0	B31.8	
379	37.3	0.0	1.000	1.000	39743.9	0.0	0.0	B31.8	
380	0.0	0.0	1.000	1.000	39706.6	0.0	0.0	B31.8	

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CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
15000	36436.6	0.0	1.482	1.642	75264.0	0.0	0.0	B31.8	
382	13830.3	0.0	1.000	1.000	52657.7	0.0	0.0	B31.8	
382	13830.3	0.0	1.000	1.000	52657.7	0.0	0.0	B31.8	
383	5689.6	0.0	1.000	1.000	44517.0	0.0	0.0	B31.8	
383	5689.6	0.0	1.000	1.000	44512.5	0.0	0.0	B31.8	
1008	21236.0	0.0	1.000	1.000	60113.5	0.0	0.0	B31.8	
1008	32016.1	0.0	2.004	1.670	70893.5	0.0	0.0	B31.8	
1009	36737.0	0.0	2.004	1.670	75015.5	0.0	0.0	B31.8	
1009	36737.0	0.0	2.004	1.670	75015.5	0.0	0.0	B31.8	
1010	31938.1	0.0	2.004	1.670	70819.8	0.0	0.0	B31.8	
1010	20337.9	0.0	1.000	1.000	59219.5	0.0	0.0	B31.8	
980	20249.5	0.0	1.000	1.000	59131.2	0.0	0.0	B31.8	
980	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
970	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
970	3364.9	0.0	1.000	1.000	23557.1	0.0	0.0	B31.8	
958	3390.9	0.0	1.000	1.000	23583.1	0.0	0.0	B31.8	
958	7134.5	0.0	1.315	1.096	27326.7	0.0	0.0	B31.8	
959	8411.4	0.0	1.315	1.096	28739.8	0.0	0.0	B31.8	
959	8411.4	0.0	1.315	1.096	28739.8	0.0	0.0	B31.8	
960	10602.5	0.0	1.315	1.096	31458.4	0.0	0.0	B31.8	
960	9157.0	0.0	1.000	1.000	30012.8	0.0	0.0	B31.8	
965	15938.9	0.0	1.000	1.000	36794.7	0.0	0.0	B31.8	
965	15938.9	0.0	1.000	1.000	36794.7	0.0	0.0	B31.8	
910	31880.6	0.0	1.033	1.044	52736.4	0.0	0.0	B31.8	
80	7186.0	0.0	3.577	3.577	98960.4	0.0	0.0	B31.8	
81	2176.7	0.0	1.000	1.000	93951.2	0.0	0.0	B31.8	
81	2176.7	0.0	1.000	1.000	93951.2	0.0	0.0	B31.8	
83	7602.3	0.0	3.577	3.577	99376.8	0.0	0.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
83	291944.9	0.0	3.577	3.577	333166.0	0.0	0.0	B31.8	
2199	42286.1	0.0	2.065	1.721	84003.6	0.0	0.0	B31.8	
2199	42286.1	0.0	2.065	1.721	84003.6	0.0	0.0	B31.8	
2200	44999.3	0.0	2.065	1.721	86708.6	0.0	0.0	B31.8	
2200	25948.6	0.0	1.000	1.000	67657.9	0.0	0.0	B31.8	
2205	5157.7	0.0	1.000	1.000	46867.0	0.0	0.0	B31.8	
2205	5157.7	0.0	1.000	1.000	46867.0	0.0	0.0	B31.8	
2211	77486.8	0.0	2.065	1.721	119985.4	0.0	0.0	B31.8	
2211	77486.8	0.0	2.065	1.721	119985.4	0.0	0.0	B31.8	
2210	80282.1	0.0	2.065	1.721	122934.1	0.0	0.0	B31.8	
2210	53849.0	0.0	1.000	1.000	96501.0	0.0	0.0	B31.8	
2214	43403.1	0.0	2.065	1.721	85482.9	0.0	0.0	B31.8	
2214	43403.1	0.0	2.065	1.721	85482.9	0.0	0.0	B31.8	
2215	34179.7	0.0	2.065	1.721	75296.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2215	22053.0	0.0	1.000	1.000	63170.0	0.0	0.0	B31.8	
2220	26577.5	0.0	1.000	1.000	67694.5	0.0	0.0	B31.8	
2220	26577.5	0.0	1.000	1.000	67694.5	0.0	0.0	B31.8	
2225	59623.6	0.0	1.518	1.691	100740.5	0.0	0.0	B31.8	
83	7990.7	0.0	3.577	3.577	99733.4	0.0	0.0	B31.8	
105	3135.5	0.0	1.000	1.000	94878.2	0.0	0.0	B31.8	
105	3135.5	0.0	1.000	1.000	94878.2	0.0	0.0	B31.8	
110	6438.5	0.0	1.000	1.000	98181.2	0.0	0.0	B31.8	
110	6438.5	0.0	1.000	1.000	98181.2	0.0	0.0	B31.8	
85	18742.1	0.0	2.464	2.952	110484.9	0.0	0.0	B31.8	
85	7705.2	0.0	2.464	2.952	47390.8	0.0	0.0	B31.8	
338	3290.5	0.0	1.000	1.000	42976.1	0.0	0.0	B31.8	
338	7431.3	0.0	1.966	1.639	47116.9	0.0	0.0	B31.8	
339	7170.1	0.0	1.966	1.639	46962.7	0.0	0.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
339	7170.1	0.0	1.966	1.639	46962.7	0.0	0.0	B31.8	
360	7178.3	0.0	1.966	1.639	47028.8	0.0	0.0	B31.8	
360	4262.4	0.0	1.000	1.000	44112.8	0.0	0.0	B31.8	
341	6243.8	0.0	1.966	1.639	46212.2	0.0	0.0	B31.8	
341	6243.8	0.0	1.966	1.639	46212.2	0.0	0.0	B31.8	
340	7036.7	0.0	1.966	1.639	46942.7	0.0	0.0	B31.8	
340	5520.6	0.0	1.000	1.000	45426.5	0.0	0.0	B31.8	
346	5896.1	0.0	1.000	1.000	45776.2	0.0	0.0	B31.8	
346	5896.1	0.0	1.000	1.000	45778.0	0.0	0.0	B31.8	
349	6188.6	0.0	1.000	1.000	46070.5	0.0	0.0	B31.8	
349	6188.6	0.0	1.000	1.000	46070.5	0.0	0.0	B31.8	
350	9987.9	0.0	1.482	1.642	49869.9	0.0	0.0	B31.8	
2225	45364.7	0.0	1.518	1.691	86100.1	0.0	0.0	B31.8	
2300	45656.0	0.0	1.518	1.691	86391.5	0.0	0.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2300	61888.2	0.0	1.518	1.691	89154.7	0.0	0.0	B31.8	
3200	7723.4	0.0	1.000	1.000	35065.9	0.0	0.0	B31.8	
3200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	33680.0	0.0	1.000	1.000	61500.4	0.0	0.0	B31.8	
3220	51903.7	0.0	1.000	1.000	79749.4	0.0	0.0	B31.8	
3220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3250	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3250	47948.9	0.0	1.854	1.854	81901.9	0.0	0.0	B31.8	
3260	11527.2	0.0	1.854	1.854	72259.4	0.0	0.0	B31.8	
3260	7641.2	-2237.2	1.000	1.000	9280.9	0.0	0.0	B31.3	
3280	7649.3	2237.2	1.000	1.000	9287.9	0.0	0.0	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	15449.2	-2237.2	2.919	2.433	16510.2	0.0	0.0	B31.3	
3299	15090.9	107.3	2.919	2.433	15530.5	0.0	0.0	B31.3	
3299	15090.9	-107.3	2.919	2.433	15530.5	0.0	0.0	B31.3	
3300	6938.0	-1298.2	2.919	2.433	7647.5	0.0	0.0	B31.3	
3300	2567.3	1298.2	1.000	1.000	3891.0	0.0	0.0	B31.3	
3309	10774.3	-638.1	2.919	2.433	11086.2	0.0	0.0	B31.3	
3309	10769.9	638.1	2.919	2.433	11081.9	0.0	0.0	B31.3	
3310	15821.9	599.4	2.919	2.433	16408.2	0.0	0.0	B31.3	
3310	5720.4	-599.4	1.000	1.000	6385.6	0.0	0.0	B31.3	
3320	49373.3	466.8	6.043	7.724	49969.3	0.0	0.0	B31.3	
2300	44261.4	0.0	1.518	1.691	85406.0	0.0	0.0	B31.8	
2310	8478.6	0.0	1.518	1.691	49623.3	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2310	43519.5	0.0	1.518	1.691	70613.6	0.0	0.0	B31.8	
2320	8472.2	0.0	1.000	1.000	35642.3	0.0	0.0	B31.8	
2320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2500	27360.1	0.0	1.000	1.000	55008.1	0.0	0.0	B31.8	
2504	40567.4	0.0	1.000	1.000	68240.7	0.0	0.0	B31.8	
2504	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	36813.5	0.0	1.854	1.854	70518.9	0.0	0.0	B31.8	
2520	9147.4	0.0	1.854	1.854	69760.2	0.0	0.0	B31.8	
2520	5680.5	-2307.9	1.000	1.000	7624.5	0.0	0.0	B31.3	
2540	5987.4	2307.9	1.000	1.000	7865.1	0.0	0.0	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
2545	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
2545	14480.6	-2307.9	2.919	2.433	15503.5	0.0	0.0	B31.3	
2551	15921.6	592.2	2.919	2.433	16319.2	0.0	0.0	B31.3	
2551	15821.3	-592.2	2.919	2.433	16219.1	0.0	0.0	B31.3	
2550	11121.9	-837.6	2.919	2.433	11497.2	0.0	0.0	B31.3	
2550	4021.1	837.6	1.000	1.000	4605.9	0.0	0.0	B31.3	
2548	2291.2	-837.6	1.000	1.000	3088.5	0.0	0.0	B31.3	
2548	6404.7	809.1	2.919	2.433	6846.2	0.0	0.0	B31.3	
2549	6900.0	63.0	2.919	2.433	7048.8	0.0	0.0	B31.3	
2549	6900.0	-63.0	2.919	2.433	7048.8	0.0	0.0	B31.3	
2555	8437.2	1172.7	2.919	2.433	9174.0	0.0	0.0	B31.3	
2555	3222.1	-1172.7	1.000	1.000	4402.2	0.0	0.0	B31.3	
2560	36423.6	913.3	6.043	7.724	36957.2	0.0	0.0	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2560	13261.8	-0.0	6.043	7.724	13335.8	0.0	0.0	B31.3	
6120	1622.0	0.0	1.000	1.000	1696.0	0.0	0.0	B31.3	
3120	10385.9	-0.0	6.043	7.724	10457.9	0.0	0.0	B31.3	
3320	10717.0	0.0	6.043	7.724	10789.0	0.0	0.0	B31.3	
3320	11389.9	-0.0	6.043	7.724	11463.9	0.0	0.0	B31.3	
6120	1622.0	0.0	1.000	1.000	1696.0	0.0	0.0	B31.3	
3120	15070.1	0.0	6.043	7.724	15188.5	0.0	0.0	B31.3	
5260	1614.7	-0.0	1.000	1.000	1733.1	0.0	0.0	B31.3	
5260	1614.7	0.0	1.000	1.000	1733.1	0.0	0.0	B31.3	
6100	4634.7	0.0	1.000	1.000	4753.1	0.0	0.0	B31.3	
6100	4634.7	0.0	1.000	1.000	4753.1	0.0	0.0	B31.3	
6110	0.0	0.0	1.000	1.000	118.4	0.0	0.0	B31.3	
5620	7698.4	0.0	6.043	7.724	7816.8	0.0	0.0	B31.3	
6130	0.0	-0.0	1.000	1.000	118.4	0.0	0.0	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2225	14771.6	0.0	1.518	1.691	56746.0	0.0	0.0	B31.8	
2240	16224.4	0.0	1.518	1.691	58198.8	0.0	0.0	B31.8	
2240	80372.0	0.0	1.518	1.691	107994.0	0.0	0.0	B31.8	
3000	11162.4	0.0	1.000	1.000	38860.5	0.0	0.0	B31.8	
3000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	50228.0	0.0	1.000	1.000	78403.9	0.0	0.0	B31.8	
3020	75524.6	0.0	1.000	1.000	103725.8	0.0	0.0	B31.8	
3020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	65526.1	0.0	1.854	1.854	99746.4	0.0	0.0	B31.8	
3060	15321.4	0.0	1.854	1.854	76182.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3060	10051.8	-3140.5	1.000	1.000	12408.0	0.0	0.0	B31.3	
3080	9687.3	3140.5	1.000	1.000	12100.4	0.0	0.0	B31.3	
3080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	19103.2	-3140.5	2.919	2.433	20664.3	0.0	0.0	B31.3	
3099	19900.0	567.7	2.919	2.433	20508.4	0.0	0.0	B31.3	
3099	19900.0	-567.7	2.919	2.433	20508.4	0.0	0.0	B31.3	
3100	10498.5	-1342.4	2.919	2.433	11142.1	0.0	0.0	B31.3	
3100	3926.9	1342.4	1.000	1.000	5062.8	0.0	0.0	B31.3	
3108	484.9	-1342.4	1.000	1.000	3034.0	0.0	0.0	B31.3	
3108	1324.4	1342.4	2.919	2.433	3299.5	0.0	0.0	B31.3	
3109	11350.8	-752.3	2.919	2.433	11764.7	0.0	0.0	B31.3	
3109	11350.8	752.3	2.919	2.433	11764.6	0.0	0.0	B31.3	
3110	18173.7	468.0	2.919	2.433	18915.3	0.0	0.0	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3110	6495.5	-468.0	1.000	1.000	7280.1	0.0	0.0	B31.3	
3120	58614.4	364.5	6.043	7.724	59379.2	0.0	0.0	B31.3	
2240	300.5	0.0	1.518	1.691	41713.6	0.0	0.0	B31.8	
5000	0.0	0.0	1.000	1.000	41413.1	0.0	0.0	B31.8	
85	21071.9	0.0	2.464	2.952	112873.2	0.0	0.0	B31.8	
89	21278.5	0.0	2.063	1.720	112804.6	0.0	0.0	B31.8	
89	21278.5	0.0	2.063	1.720	112804.6	0.0	0.0	B31.8	
90	14154.2	0.0	2.063	1.720	106354.4	0.0	0.0	B31.8	
90	9146.3	0.0	1.000	1.000	101346.6	0.0	0.0	B31.8	
100	9055.1	0.0	1.000	1.000	101254.5	0.0	0.0	B31.8	
100	9055.1	0.0	1.000	1.000	101255.3	0.0	0.0	B31.8	
101	5998.1	0.0	1.000	1.000	98198.3	0.0	0.0	B31.8	
101	9265.9	0.0	2.063	1.720	101469.0	0.0	0.0	B31.8	
102	19966.2	0.0	2.063	1.720	111056.9	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
102	19966.2	0.0	2.063	1.720	111046.1	0.0	0.0	B31.8	
9100	20485.7	0.0	2.063	1.720	111511.3	0.0	0.0	B31.8	
9100	13230.6	0.0	1.000	1.000	104195.8	0.0	0.0	B31.8	
9101	142.9	0.0	1.000	1.000	91108.1	0.0	0.0	B31.8	
9101	142.9	0.0	1.000	1.000	91007.7	0.0	0.0	B31.8	
11000	2690.7	0.0	1.000	1.000	93555.5	0.0	0.0	B31.8	
11000	2690.7	0.0	1.000	1.000	93429.3	0.0	0.0	B31.8	
11010	305.2	0.0	1.000	1.000	91043.8	0.0	0.0	B31.8	
11010	305.2	0.0	1.000	1.000	90984.6	0.0	0.0	B31.8	
11020	223.9	0.0	1.000	1.000	90903.3	0.0	0.0	B31.8	
11020	223.9	0.0	1.000	1.000	90950.8	0.0	0.0	B31.8	
11030	2577.9	0.0	1.000	1.000	93304.9	0.0	0.0	B31.8	
11030	2577.9	0.0	1.000	1.000	93459.2	0.0	0.0	B31.8	
11040	7667.5	0.0	1.000	1.000	98548.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11040	7667.5	0.0	1.000	1.000	98694.1	0.0	0.0	B31.8	
11041	12489.3	0.0	1.000	1.000	103515.9	0.0	0.0	B31.8	
11041	19337.5	0.0	2.063	1.720	110389.5	0.0	0.0	B31.8	
11042	17957.1	0.0	2.063	1.720	109152.4	0.0	0.0	B31.8	
11042	17957.1	0.0	2.063	1.720	109166.0	0.0	0.0	B31.8	
9110	6824.0	0.0	2.063	1.720	99191.9	0.0	0.0	B31.8	
9110	4417.1	0.0	1.000	1.000	96787.2	0.0	0.0	B31.8	
9119	1219.3	0.0	1.000	1.000	93589.4	0.0	0.0	B31.8	
9119	1219.3	0.0	1.000	1.000	93589.4	0.0	0.0	B31.8	
9120	10528.9	0.0	1.000	1.000	102899.0	0.0	0.0	B31.8	
9120	16289.5	0.0	2.063	1.720	108662.1	0.0	0.0	B31.8	
9129	23738.2	0.0	2.063	1.720	115400.4	0.0	0.0	B31.8	
9129	23738.2	0.0	2.063	1.720	115400.4	0.0	0.0	B31.8	
9130	22457.0	0.0	2.063	1.720	114278.5	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9130	14506.9	0.0	1.000	1.000	106328.4	0.0	0.0	B31.8	
10070	14460.0	0.0	1.000	1.000	106281.5	0.0	0.0	B31.8	
10070	14460.0	0.0	1.000	1.000	106281.5	0.0	0.0	B31.8	
10080	9489.0	0.0	1.000	1.000	101310.5	0.0	0.0	B31.8	
10080	9489.0	0.0	1.000	1.000	101310.5	0.0	0.0	B31.8	
9140	5004.9	0.0	1.000	1.000	96826.5	0.0	0.0	B31.8	
9140	5004.9	0.0	1.000	1.000	96826.5	0.0	0.0	B31.8	
9150	2629.4	0.0	1.000	1.000	94451.0	0.0	0.0	B31.8	
9150	2629.4	0.0	1.000	1.000	94451.0	0.0	0.0	B31.8	
9160	7641.1	0.0	2.464	2.952	99462.6	0.0	0.0	B31.8	
9160	14992.2	0.0	2.464	2.952	108253.6	0.0	0.0	B31.8	
9180	5094.3	0.0	1.000	1.000	98355.6	0.0	0.0	B31.8	
9180	7339.7	0.0	1.880	1.880	100601.1	0.0	0.0	B31.8	
9190	9507.9	0.0	1.880	1.880	79509.6	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9190	10645.3	0.0	2.205	1.838	80647.1	0.0	0.0	B31.8	
9199	6461.6	0.0	2.205	1.838	75633.0	0.0	0.0	B31.8	
9199	6461.6	0.0	2.205	1.838	75633.0	0.0	0.0	B31.8	
9200	11547.1	0.0	2.205	1.838	80380.4	0.0	0.0	B31.8	
9200	8198.2	0.0	1.000	1.000	77031.5	0.0	0.0	B31.8	
9210	8236.2	0.0	1.000	1.000	77069.5	0.0	0.0	B31.8	
9210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	9715.7	0.0	1.000	1.000	78549.0	0.0	0.0	B31.8	
9230	13533.9	0.0	1.000	1.000	82367.2	0.0	0.0	B31.8	
9230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	4393.3	0.0	1.000	1.000	73226.6	0.0	0.0	B31.8	
9250	12415.1	0.0	1.000	1.000	81248.4	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9250	12415.1	0.0	1.000	1.000	81248.4	0.0	0.0	B31.8	
9280	8028.4	0.0	1.000	1.000	76861.6	0.0	0.0	B31.8	
9280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	6622.0	0.0	1.000	1.000	75455.3	0.0	0.0	B31.8	
9300	3951.2	0.0	1.000	1.000	72784.5	0.0	0.0	B31.8	
9300	3951.2	0.0	1.000	1.000	72784.5	0.0	0.0	B31.8	
9310	12750.1	0.0	2.428	2.428	81583.4	0.0	0.0	B31.8	
9310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	6469.6	0.0	1.000	1.000	75302.9	0.0	0.0	B31.8	
9330	2454.3	0.0	2.071	2.428	71287.5	0.0	0.0	B31.8	
9330	17566.2	0.0	2.071	2.428	87595.7	0.0	0.0	B31.8	
9340	6265.5	0.0	2.071	2.428	76295.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9340	272.6	0.0	2.071	2.428	70284.2	0.0	0.0	B31.8	
9345	0.0	0.0	1.000	1.000	70011.6	0.0	0.0	B31.8	
9340	4683.1	0.0	2.071	2.428	74609.8	0.0	0.0	B31.8	
9350	4317.0	0.0	1.000	1.000	74243.7	0.0	0.0	B31.8	
9350	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	13238.8	0.0	1.000	1.000	83165.5	0.0	0.0	B31.8	
9370	11563.0	0.0	1.000	1.000	81489.7	0.0	0.0	B31.8	
9370	11563.0	0.0	1.000	1.000	81489.7	0.0	0.0	B31.8	
9378	682.0	0.0	1.000	1.000	70608.7	0.0	0.0	B31.8	
9378	3273.8	0.0	2.205	1.838	73200.5	0.0	0.0	B31.8	
9379	3470.6	0.0	2.205	1.838	73434.8	0.0	0.0	B31.8	
9379	3470.6	0.0	2.205	1.838	73434.8	0.0	0.0	B31.8	
9380	3669.9	0.0	2.205	1.838	73699.4	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9380	2362.2	0.0	1.000	1.000	72391.7	0.0	0.0	B31.8	
9390	6894.7	0.0	2.071	2.428	76924.2	0.0	0.0	B31.8	
9330	9363.3	0.0	2.071	2.428	78111.7	0.0	0.0	B31.8	
9335	12974.7	0.0	1.000	1.000	81723.1	0.0	0.0	B31.8	
9335	12974.7	0.0	1.000	1.000	81723.1	0.0	0.0	B31.8	
9500	10559.8	0.0	1.000	1.000	79308.2	0.0	0.0	B31.8	
9500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9510	9192.5	0.0	2.205	1.838	77940.9	0.0	0.0	B31.8	
9519	7982.0	0.0	2.205	1.838	77094.7	0.0	0.0	B31.8	
9519	7982.0	0.0	2.205	1.838	77094.7	0.0	0.0	B31.8	
9520	11319.1	0.0	2.205	1.838	81322.7	0.0	0.0	B31.8	
9520	6808.6	0.0	1.000	1.000	76812.1	0.0	0.0	B31.8	
9530	6846.2	0.0	1.000	1.000	76849.7	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9530	10578.6	0.0	1.880	1.880	80582.1	0.0	0.0	B31.8	
9550	6576.8	0.0	1.880	1.880	99839.2	0.0	0.0	B31.8	
9550	4510.1	0.0	1.000	1.000	97772.6	0.0	0.0	B31.8	
9560	12574.6	0.0	2.464	2.952	105837.0	0.0	0.0	B31.8	
9560	1968.7	0.0	2.464	2.952	93790.3	0.0	0.0	B31.8	
9900	9954.5	0.0	2.464	2.952	101776.0	0.0	0.0	B31.8	
9900	452.9	0.0	2.464	2.952	43977.6	0.0	0.0	B31.8	
10000	0.0	0.0	1.000	1.000	43524.7	0.0	0.0	B31.8	
9900	9954.0	0.0	2.464	2.952	101775.5	0.0	0.0	B31.8	
9910	5862.7	0.0	1.000	1.000	97684.2	0.0	0.0	B31.8	
9910	5862.7	0.0	1.000	1.000	97684.2	0.0	0.0	B31.8	
9920	8003.0	0.0	1.000	1.000	99824.6	0.0	0.0	B31.8	
9920	12385.2	0.0	2.063	1.720	104206.7	0.0	0.0	B31.8	
9951	10936.9	0.0	2.063	1.720	102882.4	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9951	10936.9	0.0	2.063	1.720	102882.4	0.0	0.0	B31.8	
9950	2351.7	0.0	2.063	1.720	95125.0	0.0	0.0	B31.8	
9950	1518.1	0.0	1.000	1.000	94291.3	0.0	0.0	B31.8	
9960	1428.2	0.0	1.000	1.000	94200.5	0.0	0.0	B31.8	
9960	1428.2	0.0	1.000	1.000	94201.9	0.0	0.0	B31.8	
9961	5191.1	0.0	1.000	1.000	97964.9	0.0	0.0	B31.8	
9961	8034.6	0.0	2.063	1.720	100811.7	0.0	0.0	B31.8	
9962	12348.3	0.0	2.063	1.720	104677.9	0.0	0.0	B31.8	
9962	12348.3	0.0	2.063	1.720	104693.2	0.0	0.0	B31.8	
10010	10246.9	0.0	2.063	1.720	102810.0	0.0	0.0	B31.8	
10010	6622.2	0.0	1.000	1.000	99239.3	0.0	0.0	B31.8	
10011	1032.7	0.0	1.000	1.000	93649.9	0.0	0.0	B31.8	
10011	1032.7	0.0	1.000	1.000	93741.2	0.0	0.0	B31.8	
10012	2159.6	0.0	1.000	1.000	94868.1	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10012	2159.6	0.0	1.000	1.000	94952.0	0.0	0.0	B31.8	
11100	1859.3	0.0	1.000	1.000	94651.7	0.0	0.0	B31.8	
11100	1859.3	0.0	1.000	1.000	94870.8	0.0	0.0	B31.8	
11110	3.6	0.0	1.000	1.000	93015.1	0.0	0.0	B31.8	
11110	3.6	0.0	1.000	1.000	93249.2	0.0	0.0	B31.8	
10020	2.0	0.0	1.000	1.000	93247.6	0.0	0.0	B31.8	
10020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	1.0	0.0	1.000	1.000	93258.7	0.0	0.0	B31.8	
10030	0.0	0.0	1.000	1.000	93257.8	0.0	0.0	B31.8	
9560	12372.2	0.0	2.464	2.952	105632.5	0.0	0.0	B31.8	
9580	4506.0	0.0	1.000	1.000	97766.3	0.0	0.0	B31.8	
9580	6403.0	0.0	1.880	1.880	99663.3	0.0	0.0	B31.8	
9590	8170.7	0.0	1.880	1.880	78170.5	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9590	9494.8	0.0	2.205	1.838	79494.7	0.0	0.0	B31.8	
9599	3236.2	0.0	2.205	1.838	72395.2	0.0	0.0	B31.8	
9599	3236.2	0.0	2.205	1.838	72395.2	0.0	0.0	B31.8	
9600	4751.2	0.0	2.205	1.838	73568.7	0.0	0.0	B31.8	
9600	3129.3	0.0	1.000	1.000	71946.9	0.0	0.0	B31.8	
9610	3130.9	0.0	1.000	1.000	71948.5	0.0	0.0	B31.8	
9610	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	10805.5	0.0	1.000	1.000	79623.0	0.0	0.0	B31.8	
9622	14159.4	0.0	1.000	1.000	82976.9	0.0	0.0	B31.8	
9622	14159.4	0.0	1.000	1.000	82976.9	0.0	0.0	B31.8	
9624	12624.2	0.0	1.000	1.000	81441.7	0.0	0.0	B31.8	
9624	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9627	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9627	9698.7	0.0	1.000	1.000	78516.2	0.0	0.0	B31.8	
9630	2168.1	0.0	1.000	1.000	70985.7	0.0	0.0	B31.8	
9630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	2819.3	0.0	1.000	1.000	71636.8	0.0	0.0	B31.8	
9650	3013.9	0.0	1.000	1.000	71831.4	0.0	0.0	B31.8	
9650	3013.9	0.0	1.000	1.000	71831.4	0.0	0.0	B31.8	
9660	2773.5	0.0	1.000	1.000	71591.1	0.0	0.0	B31.8	
9660	2773.5	0.0	1.000	1.000	71591.1	0.0	0.0	B31.8	
9670	1935.1	0.0	1.000	1.000	70752.6	0.0	0.0	B31.8	
9670	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	3153.9	0.0	1.000	1.000	71971.5	0.0	0.0	B31.8	
9690	11566.0	0.0	1.000	1.000	80383.6	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9690	11566.0	0.0	1.000	1.000	80383.6	0.0	0.0	B31.8	
9390	3293.6	0.0	2.071	2.428	72111.1	0.0	0.0	B31.8	
9390	7191.1	0.0	2.071	2.428	75923.7	0.0	0.0	B31.8	
9710	3220.9	0.0	1.000	1.000	71953.6	0.0	0.0	B31.8	
9710	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9720	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9720	11731.9	0.0	1.000	1.000	80464.5	0.0	0.0	B31.8	
9730	10130.5	0.0	1.000	1.000	78863.1	0.0	0.0	B31.8	
9730	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	12749.1	0.0	2.205	1.838	81481.7	0.0	0.0	B31.8	
9809	7737.8	0.0	2.205	1.838	76840.7	0.0	0.0	B31.8	
9809	7737.8	0.0	2.205	1.838	76840.7	0.0	0.0	B31.8	
9810	10304.5	0.0	2.205	1.838	80309.9	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 2 (OPE) W+D1+T1+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9810	5544.8	0.0	1.000	1.000	75550.3	0.0	0.0	B31.8	
9820	5633.8	0.0	1.000	1.000	75639.2	0.0	0.0	B31.8	
9820	9371.1	0.0	1.880	1.880	79376.5	0.0	0.0	B31.8	
9840	7277.2	0.0	1.880	1.880	100540.8	0.0	0.0	B31.8	
9840	4976.9	0.0	1.000	1.000	98240.4	0.0	0.0	B31.8	
9160	14731.2	0.0	2.464	2.952	107994.8	0.0	0.0	B31.8	
2310	23.6	0.0	1.518	1.691	41436.7	0.0	0.0	B31.8	
6000	0.0	0.0	1.000	1.000	41413.1	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

Piping Code: Multiple Codes

B31.8 = B31.8 -2003, February 6, 2004

B31.3 = B31.3 -2006, May 31, 2007

CODE STRESS CHECK PASSED : LOADCASE 3 (SUS) W+P1

Highest Stresses: (KPa)

CodeStress Ratio (%): 36.2 @Node 2560

Code Stress: 49941.9 Allowable: 137895.1

Axial Stress: 93401.4 @Node 89

Bending Stress: 51928.4 @Node 80

Torsion Stress: 2954.3 @Node 2555

Hoop Stress: 186534.4 @Node 75

3D Max Intensity: 247009.6 @Node 2520

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10210	0.0	0.0	1.000	1.000	76212.6	363758.3	21.0	B31.8	
10200	13.5	0.0	1.000	1.000	76226.1	363758.3	21.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10200	13.5	0.0	1.000	1.000	76226.1	363758.3	21.0	B31.8	
10190	1438.3	0.0	1.000	1.000	77650.9	363758.3	21.3	B31.8	
10190	1438.3	0.0	1.000	1.000	77650.9	363758.3	21.3	B31.8	
10180	2129.2	0.0	1.000	1.000	78341.8	363758.3	21.5	B31.8	
10180	2129.2	0.0	1.000	1.000	78341.8	363758.3	21.5	B31.8	
10170	99.1	0.0	1.000	1.000	76311.7	363758.3	21.0	B31.8	
10170	99.1	0.0	1.000	1.000	76311.7	363758.3	21.0	B31.8	
10160	1931.6	0.0	1.000	1.000	78144.3	363758.3	21.5	B31.8	
10160	1931.6	0.0	1.000	1.000	78144.3	363758.3	21.5	B31.8	
10150	366.8	0.0	1.000	1.000	76579.4	363758.3	21.1	B31.8	
10150	366.8	0.0	1.000	1.000	76579.4	363758.3	21.1	B31.8	
10140	660.8	0.0	1.000	1.000	76873.4	363758.3	21.1	B31.8	
10140	660.8	0.0	1.000	1.000	76873.4	363758.3	21.1	B31.8	
10135	6293.8	0.0	1.000	1.000	82506.4	363758.3	22.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10135	6293.8	0.0	1.000	1.000	82506.4	363758.3	22.7	B31.8	
10130	819.9	0.0	2.180	2.573	77032.5	363758.3	21.2	B31.8	
10130	110.1	0.0	2.180	2.573	76322.8	363758.3	21.0	B31.8	
10300	0.0	0.0	1.000	1.000	76212.6	363758.3	21.0	B31.8	
10130	930.0	0.0	2.180	2.573	77440.5	363758.3	21.3	B31.8	
10260	568.9	0.0	1.000	1.000	76806.3	363758.3	21.1	B31.8	
10260	568.9	0.0	1.000	1.000	76806.3	363758.3	21.1	B31.8	
10250	568.9	0.0	1.000	1.000	76704.3	363758.3	21.1	B31.8	
10250	568.9	0.0	1.000	1.000	76704.3	363758.3	21.1	B31.8	
10120	568.9	0.0	1.000	1.000	76696.4	363758.3	21.1	B31.8	
10120	568.9	0.0	1.000	1.000	76697.7	363758.3	21.1	B31.8	
10121	417.5	0.0	1.000	1.000	76546.4	363758.3	21.0	B31.8	
10121	589.8	0.0	2.190	1.825	76720.5	363758.3	21.1	B31.8	
10122	419.4	0.0	2.190	1.825	76554.5	363758.3	21.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10122	419.4	0.0	2.190	1.825	76554.9	363758.3	21.0	B31.8	
10110	351.0	0.0	2.190	1.825	76523.7	363758.3	21.0	B31.8	
10110	140.6	0.0	1.000	1.000	76312.2	363758.3	21.0	B31.8	
10111	586.6	0.0	1.000	1.000	76758.2	363758.3	21.1	B31.8	
10111	586.6	0.0	1.000	1.000	76756.5	363758.3	21.1	B31.8	
10112	380.8	0.0	1.000	1.000	76550.6	363758.3	21.0	B31.8	
10112	380.8	0.0	1.000	1.000	76549.2	363758.3	21.0	B31.8	
11200	100.8	0.0	1.000	1.000	76269.2	363758.3	21.0	B31.8	
11200	100.8	0.0	1.000	1.000	76265.8	363758.3	21.0	B31.8	
11210	304.5	0.0	1.000	1.000	76469.5	363758.3	21.0	B31.8	
11210	304.5	0.0	1.000	1.000	76465.9	363758.3	21.0	B31.8	
11211	1185.5	0.0	1.000	1.000	77347.0	363758.3	21.3	B31.8	
11211	1185.5	0.0	1.000	1.000	77345.1	363758.3	21.3	B31.8	
11212	1806.7	0.0	1.000	1.000	77966.2	363758.3	21.4	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11212	1806.7	0.0	1.000	1.000	77964.3	363758.3	21.4	B31.8	
11213	183.3	0.0	1.000	1.000	76340.9	363758.3	21.0	B31.8	
11213	378.6	0.0	2.190	1.825	76535.1	363758.3	21.0	B31.8	
11214	1610.0	0.0	2.190	1.825	77622.5	363758.3	21.3	B31.8	
11214	1610.0	0.0	2.190	1.825	77620.1	363758.3	21.3	B31.8	
10100	2145.3	0.0	2.190	1.825	78104.5	363758.3	21.5	B31.8	
10100	1313.1	0.0	1.000	1.000	77267.5	363758.3	21.2	B31.8	
9	1196.9	0.0	1.000	1.000	77151.3	363758.3	21.2	B31.8	
9	1196.9	0.0	1.000	1.000	77151.3	363758.3	21.2	B31.8	
10	997.7	0.0	1.000	1.000	76952.1	363758.3	21.2	B31.8	
10	997.7	0.0	1.000	1.000	76948.9	363758.3	21.2	B31.8	
18	995.3	0.0	1.000	1.000	76947.5	363758.3	21.2	B31.8	
18	1614.5	0.0	2.190	1.825	77566.7	363758.3	21.3	B31.8	
19	1964.4	0.0	2.190	1.825	78017.4	363758.3	21.4	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19	1964.4	0.0	2.190	1.825	78017.4	363758.3	21.4	B31.8	
20	2961.1	0.0	2.190	1.825	79138.0	363758.3	21.8	B31.8	
20	1794.3	0.0	1.000	1.000	77971.3	363758.3	21.4	B31.8	
30	4049.2	0.0	2.180	2.573	80226.2	363758.3	22.1	B31.8	
30	10071.7	0.0	2.180	2.573	72245.9	311257.1	23.2	B31.8	
119	2098.5	0.0	2.192	1.826	63871.6	311257.1	20.5	B31.8	
119	2098.5	0.0	2.192	1.826	63871.6	311257.1	20.5	B31.8	
120	3441.0	0.0	2.192	1.826	65003.5	311257.1	20.9	B31.8	
120	2165.6	0.0	1.000	1.000	63728.0	311257.1	20.5	B31.8	
125	2157.7	0.0	1.000	1.000	63718.2	311257.1	20.5	B31.8	
125	2157.7	0.0	1.000	1.000	63720.8	311257.1	20.5	B31.8	
149	1870.6	0.0	1.000	1.000	63433.7	311257.1	20.4	B31.8	
149	1870.6	0.0	1.000	1.000	63433.7	311257.1	20.4	B31.8	
150	2520.9	0.0	1.929	2.239	64084.0	311257.1	20.6	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
150	8415.5	0.0	1.929	2.239	70606.6	311257.1	22.7	B31.8	
220	1396.7	0.0	1.000	1.000	63587.8	311257.1	20.4	B31.8	
220	1396.7	0.0	1.000	1.000	63587.6	311257.1	20.4	B31.8	
229	125.8	0.0	1.000	1.000	62316.7	311257.1	20.0	B31.8	
229	125.8	0.0	1.000	1.000	62316.7	311257.1	20.0	B31.8	
230	4403.7	0.0	4.759	6.011	66594.6	311257.1	21.4	B31.8	
230	4819.6	0.0	4.759	6.011	39320.0	363750.0	10.8	B31.8	
231	567.1	0.0	1.000	1.000	35067.4	363750.0	9.6	B31.8	
231	567.1	0.0	1.000	1.000	35067.4	363750.0	9.6	B31.8	
232	465.9	0.0	1.000	1.000	34966.3	363750.0	9.6	B31.8	
232	465.9	0.0	1.000	1.000	34965.1	363750.0	9.6	B31.8	
1598	967.9	0.0	1.000	1.000	35518.5	363750.0	9.8	B31.8	
1598	1333.8	0.0	1.840	1.533	35884.4	363750.0	9.9	B31.8	
1599	1519.0	0.0	1.840	1.533	36108.5	363750.0	9.9	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1599	1519.0	0.0	1.840	1.533	36108.5	363750.0	9.9	B31.8	
1600	1405.7	0.0	1.840	1.533	35988.9	363750.0	9.9	B31.8	
1600	1016.5	0.0	1.000	1.000	35599.7	363750.0	9.8	B31.8	
8300	33.0	0.0	1.000	1.000	34616.2	363750.0	9.5	B31.8	
8300	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	5957.8	0.0	1.000	1.000	40541.1	363750.0	11.1	B31.8	
8320	9762.9	0.0	1.000	1.000	44346.2	363750.0	12.2	B31.8	
8320	9762.9	0.0	1.000	1.000	44346.2	363750.0	12.2	B31.8	
1610	4105.1	0.0	1.000	1.000	38688.4	363750.0	10.6	B31.8	
1610	4105.1	0.0	1.000	1.000	38688.4	363750.0	10.6	B31.8	
1650	9099.6	0.0	1.000	1.000	43682.9	363750.0	12.0	B31.8	
230	3934.1	0.0	4.759	6.011	66116.2	311257.1	21.2	B31.8	
240	998.9	0.0	1.000	1.000	63181.0	311257.1	20.3	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
240	998.9	0.0	1.000	1.000	63180.8	311257.1	20.3	B31.8	
249	508.3	0.0	1.000	1.000	62690.3	311257.1	20.1	B31.8	
249	508.3	0.0	1.000	1.000	62690.3	311257.1	20.1	B31.8	
250	208.7	0.0	4.759	6.011	62390.6	311257.1	20.0	B31.8	
250	1329.0	0.0	4.759	6.011	35773.3	363750.0	9.8	B31.8	
252	178.6	0.0	1.000	1.000	34622.9	363750.0	9.5	B31.8	
252	178.6	0.0	1.000	1.000	34622.9	363750.0	9.5	B31.8	
253	56.9	0.0	1.000	1.000	34501.3	363750.0	9.5	B31.8	
253	56.9	0.0	1.000	1.000	34501.2	363750.0	9.5	B31.8	
1698	22.3	0.0	1.000	1.000	34518.0	363750.0	9.5	B31.8	
1698	31.3	0.0	1.840	1.533	34527.0	363750.0	9.5	B31.8	
1699	157.4	0.0	1.840	1.533	34684.9	363750.0	9.5	B31.8	
1699	157.4	0.0	1.840	1.533	34684.9	363750.0	9.5	B31.8	
1700	293.3	0.0	1.840	1.533	34843.8	363750.0	9.6	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1700	212.6	0.0	1.000	1.000	34763.1	363750.0	9.6	B31.8	
8200	16.6	0.0	1.000	1.000	34567.2	363750.0	9.5	B31.8	
8200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	4934.9	0.0	1.000	1.000	39485.5	363750.0	10.9	B31.8	
8220	8353.0	0.0	1.000	1.000	42903.5	363750.0	11.8	B31.8	
8220	8353.0	0.0	1.000	1.000	42903.5	363750.0	11.8	B31.8	
1710	4634.4	0.0	1.000	1.000	39185.0	363750.0	10.8	B31.8	
1710	4634.4	0.0	1.000	1.000	39185.0	363750.0	10.8	B31.8	
1750	9800.7	0.0	1.000	1.000	44351.3	363750.0	12.2	B31.8	
250	196.1	0.0	4.759	6.011	62376.1	311257.1	20.0	B31.8	
260	65.7	0.0	1.000	1.000	62245.8	311257.1	20.0	B31.8	
260	65.7	0.0	1.000	1.000	62245.6	311257.1	20.0	B31.8	
269	116.0	0.0	1.000	1.000	62295.9	311257.1	20.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
269	116.0	0.0	1.000	1.000	62295.9	311257.1	20.0	B31.8	
270	611.9	0.0	4.759	6.011	62791.7	311257.1	20.2	B31.8	
270	998.7	0.0	4.759	6.011	35563.4	363750.0	9.8	B31.8	
272	28.1	0.0	1.000	1.000	34592.8	363750.0	9.5	B31.8	
272	28.1	0.0	1.000	1.000	34592.8	363750.0	9.5	B31.8	
273	165.6	0.0	1.000	1.000	34730.2	363750.0	9.5	B31.8	
273	165.6	0.0	1.000	1.000	34730.2	363750.0	9.5	B31.8	
1798	324.2	0.0	1.000	1.000	34940.3	363750.0	9.6	B31.8	
1798	447.2	0.0	1.840	1.533	35063.3	363750.0	9.6	B31.8	
1799	310.6	0.0	1.840	1.533	34927.5	363750.0	9.6	B31.8	
1799	310.6	0.0	1.840	1.533	34927.5	363750.0	9.6	B31.8	
1800	262.0	0.0	1.840	1.533	34818.5	363750.0	9.6	B31.8	
1800	189.7	0.0	1.000	1.000	34746.3	363750.0	9.6	B31.8	
8100	2121.0	0.0	1.000	1.000	36677.6	363750.0	10.1	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8100	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	4691.2	0.0	1.000	1.000	38119.4	363750.0	10.5	B31.8	
8120	6863.4	0.0	1.000	1.000	40291.6	363750.0	11.1	B31.8	
8120	6863.4	0.0	1.000	1.000	40291.6	363750.0	11.1	B31.8	
1810	2528.4	0.0	1.000	1.000	35956.6	363750.0	9.9	B31.8	
1810	5033.9	0.0	1.000	1.000	39590.5	363750.0	10.9	B31.8	
1850	9598.2	0.0	1.000	1.000	44154.8	363750.0	12.1	B31.8	
270	602.0	0.0	4.759	6.011	62780.6	311257.1	20.2	B31.8	
289	77.9	0.0	1.000	1.000	62256.4	311257.1	20.0	B31.8	
289	77.9	0.0	1.000	1.000	62256.4	311257.1	20.0	B31.8	
290	47.0	0.0	4.759	6.011	62225.5	311257.1	20.0	B31.8	
290	515.9	0.0	4.759	6.011	34974.1	183754.2	19.0	B31.8	
292	57.5	0.0	1.000	1.000	34515.7	183754.2	18.8	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
292	57.5	0.0	1.000	1.000	34515.7	183754.2	18.8	B31.8	
293	160.7	0.0	1.000	1.000	34618.9	183754.2	18.8	B31.8	
293	160.7	0.0	1.000	1.000	34618.6	183754.2	18.8	B31.8	
2098	273.6	0.0	1.000	1.000	34782.9	183754.2	18.9	B31.8	
2098	377.2	0.0	1.840	1.533	34886.5	183754.2	19.0	B31.8	
2099	485.6	0.0	1.840	1.533	35024.5	183754.2	19.1	B31.8	
2099	485.6	0.0	1.840	1.533	35024.5	183754.2	19.1	B31.8	
2100	546.4	0.0	1.840	1.533	35099.6	183754.2	19.1	B31.8	
2100	395.8	0.0	1.000	1.000	34949.0	363750.0	9.6	B31.8	
8000	25.6	0.0	1.000	1.000	34578.7	363750.0	9.5	B31.8	
8000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	5202.7	0.0	1.000	1.000	39755.9	363750.0	10.9	B31.8	
8020	8716.4	0.0	1.000	1.000	43269.6	363750.0	11.9	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8020	8716.4	0.0	1.000	1.000	43269.6	363750.0	11.9	B31.8	
2110	4497.9	0.0	1.000	1.000	39051.0	363750.0	10.7	B31.8	
2110	4497.9	0.0	1.000	1.000	39051.0	363750.0	10.7	B31.8	
2150	9619.7	0.0	1.000	1.000	44172.8	363750.0	12.1	B31.8	
290	8.8	0.0	4.759	6.011	62186.9	183754.2	33.8	B31.8	
299	1.2	0.0	1.000	1.000	62179.4	183754.2	33.8	B31.8	
299	1.2	0.0	1.000	1.000	62179.4	183754.2	33.8	B31.8	
300	0.0	0.0	1.000	1.000	62178.1	183754.2	33.8	B31.8	
150	5938.7	0.0	1.929	2.239	68122.1	311257.1	21.9	B31.8	
160	487.7	0.0	1.000	1.000	62671.1	311257.1	20.1	B31.8	
160	487.7	0.0	1.000	1.000	62671.3	311257.1	20.1	B31.8	
179	294.5	0.0	1.000	1.000	62478.1	311257.1	20.1	B31.8	
179	294.5	0.0	1.000	1.000	62478.1	311257.1	20.1	B31.8	
180	409.8	0.0	4.759	6.011	62593.4	311257.1	20.1	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
180	4904.7	0.0	4.759	6.011	39366.4	363750.0	10.8	B31.8	
182	650.7	0.0	1.000	1.000	35112.4	363750.0	9.7	B31.8	
182	650.7	0.0	1.000	1.000	35112.4	363750.0	9.7	B31.8	
183	127.2	0.0	1.000	1.000	34588.9	363750.0	9.5	B31.8	
183	127.2	0.0	1.000	1.000	34588.6	363750.0	9.5	B31.8	
1499	628.7	0.0	1.840	1.533	35181.2	363750.0	9.7	B31.8	
1499	628.7	0.0	1.840	1.533	35181.2	363750.0	9.7	B31.8	
1500	702.7	0.0	1.840	1.533	35271.6	363750.0	9.7	B31.8	
1500	504.5	0.0	1.000	1.000	35073.4	363750.0	9.6	B31.8	
8400	55.8	0.0	1.000	1.000	34624.7	363750.0	9.5	B31.8	
8400	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	5214.2	0.0	1.000	1.000	39783.1	363750.0	10.9	B31.8	
8420	8752.6	0.0	1.000	1.000	43321.4	363750.0	11.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8420	8752.6	0.0	1.000	1.000	43321.4	363750.0	11.9	B31.8	
1510	4484.6	0.0	1.000	1.000	39053.5	363750.0	10.7	B31.8	
1510	4484.6	0.0	1.000	1.000	39053.5	363750.0	10.7	B31.8	
1550	9602.8	0.0	1.000	1.000	44171.7	363750.0	12.1	B31.8	
180	6.3	0.0	4.759	6.011	62184.4	311257.1	20.0	B31.8	
189	0.9	0.0	1.000	1.000	62179.0	311257.1	20.0	B31.8	
189	0.9	0.0	1.000	1.000	62179.0	311257.1	20.0	B31.8	
190	0.0	0.0	1.000	1.000	62178.1	311257.1	20.0	B31.8	
30	5386.6	0.0	2.180	2.573	81598.0	363758.3	22.4	B31.8	
35	3601.1	0.0	1.000	1.000	79812.5	363758.3	21.9	B31.8	
35	3601.1	0.0	1.000	1.000	79812.5	363758.3	21.9	B31.8	
40	5229.7	0.0	1.000	1.000	81441.1	363758.3	22.4	B31.8	
40	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	8016.9	0.0	1.000	1.000	101282.6	363758.3	27.8	B31.8	
75	12724.3	0.0	1.000	1.000	105990.1	363758.3	29.1	B31.8	
75	12724.3	0.0	1.000	1.000	105990.1	363758.3	29.1	B31.8	
80	29672.4	0.0	3.577	3.577	122938.1	363758.3	33.8	B31.8	
80	51928.4	0.0	3.577	3.577	92276.4	363750.0	25.4	B31.8	
5495	6792.1	0.0	1.000	1.000	47140.1	363750.0	13.0	B31.8	
5495	6792.1	0.0	1.000	1.000	47140.1	363750.0	13.0	B31.8	
5501	962.0	0.0	2.004	1.670	41333.4	363750.0	11.4	B31.8	
5501	962.0	0.0	2.004	1.670	41333.4	363750.0	11.4	B31.8	
5500	5501.6	0.0	2.004	1.670	45891.2	363750.0	12.6	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5500	4165.7	0.0	1.000	1.000	44555.3	363750.0	12.2	B31.8	
5510	4215.4	0.0	1.000	1.000	44605.0	363750.0	12.3	B31.8	
5510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	9680.7	0.0	1.000	1.000	50070.3	363750.0	13.8	B31.8	
5530	1766.5	0.0	1.000	1.000	42156.1	363750.0	11.6	B31.8	
5530	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	955.9	0.0	1.000	1.000	41345.5	363750.0	11.4	B31.8	
5550	602.5	0.0	1.000	1.000	40992.2	363750.0	11.3	B31.8	
5550	602.5	0.0	1.000	1.000	40992.2	363750.0	11.3	B31.8	
5559	4168.1	0.0	2.004	1.670	44837.4	363750.0	12.3	B31.8	
5559	4168.1	0.0	2.004	1.670	44837.4	363750.0	12.3	B31.8	
5560	5117.1	0.0	2.004	1.670	45905.2	363750.0	12.6	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5560	3491.2	0.0	1.000	1.000	42919.8	363750.0	11.8	B31.8	
5570	3489.3	0.0	1.000	1.000	42918.2	363750.0	11.8	B31.8	
5570	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	3743.1	0.0	1.683	1.683	43667.7	363750.0	12.0	B31.8	
5590	1765.9	0.0	1.683	1.683	69074.9	363750.0	19.0	B31.8	
5590	1370.8	176.9	1.000	1.000	1599.2	137895.1	1.2	B31.3	
5595	344.2	-176.9	1.000	1.000	377.8	137895.1	0.3	B31.3	
5595	344.2	176.9	1.000	1.000	377.8	137895.1	0.3	B31.3	
5599	680.3	-132.8	3.131	2.609	791.5	137895.1	0.6	B31.3	
5599	680.3	132.8	3.131	2.609	791.5	137895.1	0.6	B31.3	
5600	1610.0	-30.1	3.131	2.609	1677.1	137895.1	1.2	B31.3	
5600	538.4	30.1	1.000	1.000	605.5	137895.1	0.4	B31.3	
5605	783.6	-30.1	1.000	1.000	850.7	137895.1	0.6	B31.3	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5605	783.6	30.1	1.000	1.000	850.7	137895.1	0.6	B31.3	
5609	540.4	-53.8	3.131	2.609	569.5	137895.1	0.4	B31.3	
5609	540.4	53.8	3.131	2.609	569.5	137895.1	0.4	B31.3	
5610	1132.1	-181.2	3.131	2.609	1137.9	137895.1	0.8	B31.3	
5610	433.8	181.2	1.000	1.000	439.6	137895.1	0.3	B31.3	
5620	9286.6	-186.9	6.043	7.724	9318.1	137895.1	6.8	B31.3	
5620	270.7	-0.0	6.043	7.724	474.2	137895.1	0.3	B31.3	
2560	270.8	0.0	6.043	7.724	474.4	137895.1	0.3	B31.3	
350	8037.1	0.0	1.482	1.642	47683.6	363750.0	13.1	B31.8	
400	3579.3	0.0	1.000	1.000	43225.8	363750.0	11.9	B31.8	
400	3579.3	0.0	1.000	1.000	43225.8	363750.0	11.9	B31.8	
410	1120.8	0.0	1.000	1.000	40767.3	363750.0	11.2	B31.8	
420	2656.1	0.0	1.482	1.642	42042.4	183754.2	22.9	B31.8	
1294	2154.0	0.0	1.000	1.000	41540.3	183754.2	22.6	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1294	2154.0	0.0	1.000	1.000	41540.3	183754.2	22.6	B31.8	
1295	2060.7	0.0	1.000	1.000	41446.9	183754.2	22.6	B31.8	
1295	2060.7	0.0	1.000	1.000	41442.9	363750.0	11.4	B31.8	
1298	2414.8	0.0	1.000	1.000	41851.6	363750.0	11.5	B31.8	
1298	3178.1	0.0	2.004	1.670	42614.8	363750.0	11.7	B31.8	
1299	5002.3	0.0	2.004	1.670	44747.7	363750.0	12.3	B31.8	
1299	5002.3	0.0	2.004	1.670	44747.7	363750.0	12.3	B31.8	
1300	10485.0	0.0	2.004	1.670	50881.7	363750.0	14.0	B31.8	
1300	6820.4	0.0	1.000	1.000	47217.1	183754.2	25.7	B31.8	
1330	6874.2	0.0	1.000	1.000	47271.0	183754.2	25.7	B31.8	
1330	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1340	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1340	1338.4	0.0	1.257	1.047	82024.7	351265.5	23.4	B31.8	
1349	2912.2	0.0	1.257	1.047	83598.1	351265.5	23.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1349	2912.2	0.0	1.257	1.047	83598.1	351265.5	23.8	B31.8	
1350	5390.3	0.0	1.257	1.047	86065.1	351265.5	24.5	B31.8	
1350	3306.0	0.0	1.000	1.000	83980.8	351265.5	23.9	B31.8	
1355	9940.2	0.0	1.000	1.000	90615.0	351265.5	25.8	B31.8	
1355	9940.2	0.0	1.000	1.000	90615.0	351265.5	25.8	B31.8	
1360	4400.8	0.0	1.033	1.044	85075.6	351265.5	24.2	B31.8	
410	1120.8	0.0	1.000	1.000	40766.9	363750.0	11.2	B31.8	
420	634.3	0.0	1.482	1.642	40280.4	363750.0	11.1	B31.8	
420	1385.1	0.0	1.482	1.642	41017.4	363750.0	11.3	B31.8	
429	788.7	0.0	1.000	1.000	40421.0	363750.0	11.1	B31.8	
429	788.7	0.0	1.000	1.000	40421.0	363750.0	11.1	B31.8	
430	2816.6	0.0	1.000	1.000	42448.9	363750.0	11.7	B31.8	
440	814.9	0.0	1.482	1.642	40142.2	363750.0	11.0	B31.8	
1989	892.9	0.0	1.000	1.000	40220.1	363750.0	11.1	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1989	892.9	0.0	1.000	1.000	40220.1	363750.0	11.1	B31.8	
1990	1176.8	0.0	1.000	1.000	40504.1	363750.0	11.1	B31.8	
1990	1176.8	0.0	1.000	1.000	40501.6	363750.0	11.1	B31.8	
1998	1454.3	0.0	1.000	1.000	40833.6	363750.0	11.2	B31.8	
1998	1865.4	0.0	2.004	1.670	41244.7	363750.0	11.3	B31.8	
1999	3407.8	0.0	2.004	1.670	43097.9	363750.0	11.8	B31.8	
1999	3407.8	0.0	2.004	1.670	43097.9	363750.0	11.8	B31.8	
2000	9292.1	0.0	2.004	1.670	49668.2	363750.0	13.7	B31.8	
2000	6096.7	0.0	1.000	1.000	46472.7	363750.0	12.8	B31.8	
2030	6154.0	0.0	1.000	1.000	46530.0	363750.0	12.8	B31.8	
2030	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	1676.6	0.0	1.257	1.047	82351.7	351265.5	23.4	B31.8	
2049	1634.0	0.0	1.257	1.047	82314.3	351265.5	23.4	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2049	1634.0	0.0	1.257	1.047	82314.3	351265.5	23.4	B31.8	
2050	4407.5	0.0	1.257	1.047	85085.7	351265.5	24.2	B31.8	
2050	3376.5	0.0	1.000	1.000	84054.7	351265.5	23.9	B31.8	
2060	9542.2	0.0	1.000	1.000	90220.4	351265.5	25.7	B31.8	
2060	9542.2	0.0	1.000	1.000	90220.4	351265.5	25.7	B31.8	
1950	3048.0	0.0	1.033	1.044	83726.2	351265.5	23.8	B31.8	
430	2816.6	0.0	1.000	1.000	42447.7	363750.0	11.7	B31.8	
440	2353.9	0.0	1.482	1.642	41985.0	363750.0	11.5	B31.8	
440	2554.2	0.0	1.482	1.642	42184.6	363750.0	11.6	B31.8	
449	46.5	0.0	1.000	1.000	39676.9	363750.0	10.9	B31.8	
449	46.5	0.0	1.000	1.000	39676.9	363750.0	10.9	B31.8	
450	2230.7	0.0	1.000	1.000	41861.2	363750.0	11.5	B31.8	
18000	1104.8	0.0	1.482	1.642	40429.2	363750.0	11.1	B31.8	
1044	1014.4	0.0	1.000	1.000	40338.9	363750.0	11.1	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1044	1014.4	0.0	1.000	1.000	40338.9	363750.0	11.1	B31.8	
1045	1203.0	0.0	1.000	1.000	40527.5	363750.0	11.1	B31.8	
1045	1203.0	0.0	1.000	1.000	40525.0	363750.0	11.1	B31.8	
1048	1404.5	0.0	1.000	1.000	40781.1	363750.0	11.2	B31.8	
1048	1804.2	0.0	2.004	1.670	41180.7	363750.0	11.3	B31.8	
1049	3399.3	0.0	2.004	1.670	43091.9	363750.0	11.8	B31.8	
1049	3399.3	0.0	2.004	1.670	43091.9	363750.0	11.8	B31.8	
1050	9347.4	0.0	2.004	1.670	49729.7	363750.0	13.7	B31.8	
1050	6143.2	0.0	1.000	1.000	46525.5	363750.0	12.8	B31.8	
1080	6200.6	0.0	1.000	1.000	46582.9	363750.0	12.8	B31.8	
1080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	1708.1	0.0	1.257	1.047	82386.6	351265.5	23.5	B31.8	
1099	1535.0	0.0	1.257	1.047	82215.7	351265.5	23.4	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1099	1535.0	0.0	1.257	1.047	82215.7	351265.5	23.4	B31.8	
1100	4369.2	0.0	1.257	1.047	85044.6	351265.5	24.2	B31.8	
1100	3404.3	0.0	1.000	1.000	84079.7	351265.5	23.9	B31.8	
1105	9563.8	0.0	1.000	1.000	90239.2	351265.5	25.7	B31.8	
1105	9563.8	0.0	1.000	1.000	90239.2	351265.5	25.7	B31.8	
1110	3040.3	0.0	1.033	1.044	83715.7	351265.5	23.8	B31.8	
450	2230.7	0.0	1.000	1.000	41859.9	363750.0	11.5	B31.8	
18000	2207.8	0.0	1.482	1.642	41837.0	363750.0	11.5	B31.8	
18000	2465.4	0.0	1.482	1.642	42092.1	363750.0	11.6	B31.8	
460	4463.4	0.0	1.000	1.000	44090.1	363750.0	12.1	B31.8	
460	4463.4	0.0	1.000	1.000	44088.9	363750.0	12.1	B31.8	
16000	2366.6	0.0	1.482	1.642	41992.0	363750.0	11.5	B31.8	
16000	72.6	0.0	1.482	1.642	39781.2	363750.0	10.9	B31.8	
469	32.7	0.0	1.000	1.000	39741.2	363750.0	10.9	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
469	32.7	0.0	1.000	1.000	39741.2	363750.0	10.9	B31.8	
470	0.0	0.0	1.000	1.000	39708.6	363750.0	10.9	B31.8	
16000	7446.5	0.0	1.482	1.642	46895.1	363750.0	12.9	B31.8	
489	3293.9	0.0	1.000	1.000	42742.5	363750.0	11.8	B31.8	
489	3293.9	0.0	1.000	1.000	42742.5	363750.0	11.8	B31.8	
490	1389.4	0.0	1.000	1.000	40838.0	363750.0	11.2	B31.8	
490	1389.4	0.0	1.000	1.000	40832.6	363750.0	11.2	B31.8	
509	6326.8	0.0	2.004	1.670	46105.3	363750.0	12.7	B31.8	
509	6326.8	0.0	2.004	1.670	46105.3	363750.0	12.7	B31.8	
510	11075.7	0.0	2.004	1.670	51458.4	363750.0	14.1	B31.8	
510	6896.7	0.0	1.000	1.000	47279.4	363750.0	13.0	B31.8	
540	6945.9	0.0	1.000	1.000	47328.6	363750.0	13.0	B31.8	
540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
550	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
550	4381.1	0.0	1.257	1.047	85059.8	351265.5	24.2	B31.8	
559	5767.0	0.0	1.257	1.047	86514.2	351265.5	24.6	B31.8	
559	5767.0	0.0	1.257	1.047	86514.2	351265.5	24.6	B31.8	
560	7220.6	0.0	1.257	1.047	87989.8	351265.5	25.0	B31.8	
560	4891.5	0.0	1.000	1.000	85660.7	351265.5	24.4	B31.8	
565	10092.6	0.0	1.000	1.000	90861.8	351265.5	25.9	B31.8	
565	10092.6	0.0	1.000	1.000	90861.8	351265.5	25.9	B31.8	
570	10329.9	0.0	1.033	1.044	91099.1	351265.5	25.9	B31.8	
570	9861.4	0.0	1.033	1.044	90503.4	351265.5	25.8	B31.8	
620	4880.4	0.0	1.000	1.000	85522.3	351265.5	24.3	B31.8	
620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	819.8	0.0	1.000	1.000	81461.8	351265.5	23.2	B31.8	
635	4692.0	0.0	1.000	1.000	85334.0	351265.5	24.3	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
635	4692.0	0.0	1.000	1.000	85334.0	351265.5	24.3	B31.8	
14028	2019.5	0.0	1.000	1.000	82661.5	351265.5	23.5	B31.8	
14028	8772.6	0.0	1.257	1.047	89414.6	351265.5	25.5	B31.8	
14029	8075.7	0.0	1.257	1.047	88641.9	351265.5	25.2	B31.8	
14029	8075.7	0.0	1.257	1.047	88641.9	351265.5	25.2	B31.8	
14030	6480.8	0.0	1.257	1.047	87030.8	351265.5	24.8	B31.8	
14030	6244.5	0.0	1.000	1.000	86794.4	351265.5	24.7	B31.8	
14025	1964.8	0.0	1.000	1.000	82514.7	351265.5	23.5	B31.8	
14025	1964.8	0.0	1.000	1.000	82514.7	351265.5	23.5	B31.8	
14019	7145.8	0.0	1.257	1.047	87555.5	351265.5	24.9	B31.8	
14019	7145.8	0.0	1.257	1.047	87555.5	351265.5	24.9	B31.8	
14020	7028.1	0.0	1.257	1.047	87468.7	351265.5	24.9	B31.8	
14020	6916.6	0.0	1.000	1.000	87357.2	351265.5	24.9	B31.8	
14013	3821.6	0.0	1.000	1.000	84361.6	351265.5	24.0	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14013	4020.0	0.0	1.257	1.047	84560.0	351265.5	24.1	B31.8	
14014	3373.5	0.0	1.257	1.047	83983.4	351265.5	23.9	B31.8	
14014	3373.5	0.0	1.257	1.047	83983.4	351265.5	23.9	B31.8	
14015	2977.5	0.0	1.257	1.047	83671.1	351265.5	23.8	B31.8	
14015	477.1	0.0	1.000	1.000	81170.6	351265.5	23.1	B31.8	
14008	1265.5	0.0	1.000	1.000	81959.1	351265.5	23.3	B31.8	
14008	3199.9	0.0	1.257	1.047	83893.5	351265.5	23.9	B31.8	
14009	3510.8	0.0	1.257	1.047	84113.5	351265.5	23.9	B31.8	
14009	3510.8	0.0	1.257	1.047	84113.5	351265.5	23.9	B31.8	
14010	3718.8	0.0	1.257	1.047	84268.7	351265.5	24.0	B31.8	
14010	3609.1	0.0	1.000	1.000	84159.0	351265.5	24.0	B31.8	
707	6889.4	0.0	2.521	3.028	87439.3	351265.5	24.9	B31.8	
680	74.8	0.0	1.000	1.000	89795.7	351265.5	25.6	B31.8	
750	1038.4	0.0	1.000	1.000	90759.3	351265.5	25.8	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
750	1038.4	0.0	1.000	1.000	90759.3	351265.5	25.8	B31.8	
17000	1894.4	0.0	2.521	3.028	91615.3	351265.5	26.1	B31.8	
17000	1851.4	0.0	2.521	3.028	91569.8	351265.5	26.1	B31.8	
754	1019.3	0.0	1.000	1.000	90737.7	351265.5	25.8	B31.8	
754	1019.3	0.0	1.000	1.000	90737.7	351265.5	25.8	B31.8	
755	1059.6	0.0	1.000	1.000	90777.9	351265.5	25.8	B31.8	
17000	1142.4	0.0	2.521	3.028	81584.4	351265.5	23.2	B31.8	
4229	301.3	0.0	1.000	1.000	80743.3	351265.5	23.0	B31.8	
4229	301.3	0.0	1.000	1.000	80743.3	351265.5	23.0	B31.8	
4230	371.2	0.0	1.000	1.000	80813.1	351265.5	23.0	B31.8	
4230	371.2	0.0	1.000	1.000	80810.9	351265.5	23.0	B31.8	
17008	476.5	0.0	1.000	1.000	80974.4	351265.5	23.1	B31.8	
17008	487.7	0.0	1.257	1.047	80985.6	351265.5	23.1	B31.8	
17009	298.1	0.0	1.257	1.047	80855.1	351265.5	23.0	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17009	298.1	0.0	1.257	1.047	80855.1	351265.5	23.0	B31.8	
17010	550.5	0.0	1.257	1.047	81211.6	351265.5	23.1	B31.8	
17010	493.9	0.0	1.000	1.000	81154.9	351265.5	23.1	B31.8	
17018	382.1	0.0	1.000	1.000	81043.2	351265.5	23.1	B31.8	
17018	453.0	0.0	1.257	1.047	81114.0	351265.5	23.1	B31.8	
17019	1136.6	0.0	1.257	1.047	81801.3	351265.5	23.3	B31.8	
17019	1136.6	0.0	1.257	1.047	81801.3	351265.5	23.3	B31.8	
17020	1751.0	0.0	1.257	1.047	82421.1	351265.5	23.5	B31.8	
17020	943.3	0.0	1.000	1.000	81613.4	351265.5	23.2	B31.8	
17025	1788.3	0.0	1.000	1.000	82458.4	351265.5	23.5	B31.8	
17025	1788.3	0.0	1.000	1.000	82458.4	351265.5	23.5	B31.8	
17029	1909.2	0.0	1.257	1.047	82583.4	351265.5	23.5	B31.8	
17029	1909.2	0.0	1.257	1.047	82583.4	351265.5	23.5	B31.8	
17030	2106.0	0.0	1.257	1.047	82780.5	351265.5	23.6	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17030	1929.2	0.0	1.000	1.000	82603.7	351265.5	23.5	B31.8	
1225	3505.9	0.0	1.000	1.000	84180.4	351265.5	24.0	B31.8	
1225	3505.9	0.0	1.000	1.000	84180.4	351265.5	24.0	B31.8	
1230	597.5	0.0	1.000	1.000	81272.1	351265.5	23.1	B31.8	
1230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1240	5278.5	0.0	1.000	1.000	85953.0	351265.5	24.5	B31.8	
1110	3591.6	0.0	1.033	1.044	84266.1	351265.5	24.0	B31.8	
1110	895.4	0.0	1.033	1.044	81580.6	351265.5	23.2	B31.8	
1248	498.2	0.0	1.000	1.000	81183.4	351265.5	23.1	B31.8	
1248	677.5	0.0	1.257	1.047	81362.7	351265.5	23.2	B31.8	
1249	548.9	0.0	1.257	1.047	81277.6	351265.5	23.1	B31.8	
1249	548.9	0.0	1.257	1.047	81277.6	351265.5	23.1	B31.8	
1250	566.8	0.0	1.257	1.047	81323.3	351265.5	23.2	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1250	566.8	0.0	1.257	1.047	81323.3	351265.5	23.2	B31.8	
17099	586.3	0.0	1.257	1.047	81343.3	351265.5	23.2	B31.8	
17099	586.3	0.0	1.257	1.047	81343.3	351265.5	23.2	B31.8	
17100	750.9	0.0	1.257	1.047	81436.1	351265.5	23.2	B31.8	
17100	463.6	0.0	1.000	1.000	81148.8	351265.5	23.1	B31.8	
17110	471.8	0.0	1.000	1.000	81157.0	351265.5	23.1	B31.8	
17110	756.0	0.0	1.000	1.000	81420.0	351265.5	23.2	B31.8	
1260	2190.2	0.0	1.000	1.000	73351.1	351265.5	20.9	B31.8	
1260	1845.9	0.0	1.000	1.000	73041.5	351265.5	20.8	B31.8	
1270	3675.2	0.0	1.000	1.000	74870.8	351265.5	21.3	B31.8	
755	1059.6	0.0	1.000	1.000	90777.9	351265.5	25.8	B31.8	
760	416.0	0.0	1.000	1.000	90134.3	351265.5	25.7	B31.8	
760	416.0	0.0	1.000	1.000	90134.2	351265.5	25.7	B31.8	
19000	556.1	0.0	2.521	3.028	90274.3	351265.5	25.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19000	560.1	0.0	2.521	3.028	90277.7	351265.5	25.7	B31.8	
769	298.6	0.0	1.000	1.000	90016.2	351265.5	25.6	B31.8	
769	298.6	0.0	1.000	1.000	90016.2	351265.5	25.6	B31.8	
770	301.8	0.0	1.000	1.000	90019.4	351265.5	25.6	B31.8	
19000	283.5	0.0	2.521	3.028	80708.5	351265.5	23.0	B31.8	
4299	464.5	0.0	1.000	1.000	80889.5	351265.5	23.0	B31.8	
4299	464.5	0.0	1.000	1.000	80889.5	351265.5	23.0	B31.8	
4300	812.3	0.0	1.000	1.000	81237.3	351265.5	23.1	B31.8	
4300	812.3	0.0	1.000	1.000	81236.6	351265.5	23.1	B31.8	
19009	861.9	0.0	1.257	1.047	81399.1	351265.5	23.2	B31.8	
19009	861.9	0.0	1.257	1.047	81399.1	351265.5	23.2	B31.8	
19010	277.4	0.0	1.257	1.047	80925.9	351265.5	23.0	B31.8	
19010	188.6	0.0	1.000	1.000	80837.0	351265.5	23.0	B31.8	
19018	221.4	0.0	1.000	1.000	80869.9	351265.5	23.0	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19018	300.7	0.0	1.257	1.047	80949.1	351265.5	23.0	B31.8	
19019	586.6	0.0	1.257	1.047	81240.1	351265.5	23.1	B31.8	
19019	586.6	0.0	1.257	1.047	81240.1	351265.5	23.1	B31.8	
19020	1237.0	0.0	1.257	1.047	81903.9	351265.5	23.3	B31.8	
19020	872.1	0.0	1.000	1.000	81539.0	351265.5	23.2	B31.8	
19025	1652.9	0.0	1.000	1.000	82319.8	351265.5	23.4	B31.8	
19025	1652.9	0.0	1.000	1.000	82319.8	351265.5	23.4	B31.8	
19029	1309.5	0.0	1.257	1.047	81990.3	351265.5	23.3	B31.8	
19029	1309.5	0.0	1.257	1.047	81990.3	351265.5	23.3	B31.8	
19030	1528.3	0.0	1.257	1.047	82215.4	351265.5	23.4	B31.8	
19030	1397.9	0.0	1.000	1.000	82085.0	351265.5	23.4	B31.8	
1925	3422.7	0.0	1.000	1.000	84109.8	351265.5	23.9	B31.8	
1925	3422.7	0.0	1.000	1.000	84109.8	351265.5	23.9	B31.8	
1930	765.4	0.0	1.000	1.000	81452.5	351265.5	23.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1930	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	5492.2	0.0	1.000	1.000	86179.3	351265.5	24.5	B31.8	
1950	3769.9	0.0	1.033	1.044	84457.0	351265.5	24.0	B31.8	
1950	1044.1	0.0	1.033	1.044	81738.5	351265.5	23.3	B31.8	
1958	494.3	0.0	1.000	1.000	81188.7	351265.5	23.1	B31.8	
1958	707.0	0.0	1.257	1.047	81401.5	351265.5	23.2	B31.8	
1959	575.0	0.0	1.257	1.047	81315.5	351265.5	23.1	B31.8	
1959	575.0	0.0	1.257	1.047	81315.5	351265.5	23.1	B31.8	
1960	601.3	0.0	1.257	1.047	81365.4	351265.5	23.2	B31.8	
1960	601.3	0.0	1.257	1.047	81365.4	351265.5	23.2	B31.8	
19099	621.7	0.0	1.257	1.047	81390.5	351265.5	23.2	B31.8	
19099	621.7	0.0	1.257	1.047	81390.5	351265.5	23.2	B31.8	
19100	764.8	0.0	1.257	1.047	81459.2	351265.5	23.2	B31.8	

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STRESSES REPORT: Stresses on Elements
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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19100	433.0	0.0	1.000	1.000	81127.5	351265.5	23.1	B31.8	
19110	442.0	0.0	1.000	1.000	81136.4	351265.5	23.1	B31.8	
19110	769.9	0.0	1.000	1.000	81464.4	351265.5	23.2	B31.8	
1970	2227.8	0.0	1.000	1.000	73437.4	351265.5	20.9	B31.8	
1970	1830.5	0.0	1.000	1.000	73040.0	351265.5	20.8	B31.8	
1980	3780.8	0.0	1.000	1.000	74990.4	351265.5	21.3	B31.8	
770	301.8	0.0	1.000	1.000	90019.3	351265.5	25.6	B31.8	
780	23.0	0.0	1.000	1.000	89740.5	351265.5	25.5	B31.8	
780	23.0	0.0	1.000	1.000	89740.4	351265.5	25.5	B31.8	
13000	168.8	0.0	2.521	3.028	89886.2	351265.5	25.6	B31.8	
13000	171.8	0.0	2.521	3.028	89888.5	351265.5	25.6	B31.8	
789	40.7	0.0	1.000	1.000	89757.4	351265.5	25.6	B31.8	
789	40.7	0.0	1.000	1.000	89757.4	351265.5	25.6	B31.8	
790	16.6	0.0	1.000	1.000	89733.4	351265.5	25.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
13000	639.2	0.0	2.521	3.028	81062.5	351265.5	23.1	B31.8	
4399	573.6	0.0	1.000	1.000	80996.9	351265.5	23.1	B31.8	
4399	573.6	0.0	1.000	1.000	80996.9	351265.5	23.1	B31.8	
4400	893.4	0.0	1.000	1.000	81316.7	351265.5	23.1	B31.8	
4400	893.4	0.0	1.000	1.000	81316.3	351265.5	23.1	B31.8	
13008	1140.0	0.0	1.000	1.000	81621.0	351265.5	23.2	B31.8	
13008	1169.4	0.0	1.257	1.047	81650.3	351265.5	23.2	B31.8	
13009	927.1	0.0	1.257	1.047	81465.4	351265.5	23.2	B31.8	
13009	927.1	0.0	1.257	1.047	81465.4	351265.5	23.2	B31.8	
13010	379.8	0.0	1.257	1.047	81031.3	351265.5	23.1	B31.8	
13010	296.1	0.0	1.000	1.000	80947.6	351265.5	23.0	B31.8	
13018	224.7	0.0	1.000	1.000	80876.2	351265.5	23.0	B31.8	
13018	327.2	0.0	1.257	1.047	80978.7	351265.5	23.1	B31.8	
13019	472.8	0.0	1.257	1.047	81130.6	351265.5	23.1	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
13019	472.8	0.0	1.257	1.047	81130.6	351265.5	23.1	B31.8	
13020	1138.9	0.0	1.257	1.047	81808.9	351265.5	23.3	B31.8	
13020	827.2	0.0	1.000	1.000	81497.3	351265.5	23.2	B31.8	
13025	1606.9	0.0	1.000	1.000	82276.9	351265.5	23.4	B31.8	
13025	1606.9	0.0	1.000	1.000	82276.9	351265.5	23.4	B31.8	
13029	1206.6	0.0	1.257	1.047	81887.6	351265.5	23.3	B31.8	
13029	1206.6	0.0	1.257	1.047	81887.6	351265.5	23.3	B31.8	
13030	1434.2	0.0	1.257	1.047	82118.3	351265.5	23.4	B31.8	
13030	1328.3	0.0	1.000	1.000	82012.5	351265.5	23.3	B31.8	
1425	3317.2	0.0	1.000	1.000	84001.4	351265.5	23.9	B31.8	
1425	3317.2	0.0	1.000	1.000	84001.4	351265.5	23.9	B31.8	
1430	878.8	0.0	1.000	1.000	81562.9	351265.5	23.2	B31.8	
1430	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1440	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1440	6146.3	0.0	1.000	1.000	86830.4	351265.5	24.7	B31.8	
1360	4449.6	0.0	1.033	1.044	85133.8	351265.5	24.2	B31.8	
1360	679.8	0.0	1.033	1.044	81382.5	351265.5	23.2	B31.8	
1448	358.2	0.0	1.000	1.000	81060.9	351265.5	23.1	B31.8	
1448	599.5	0.0	1.257	1.047	81302.1	351265.5	23.1	B31.8	
1449	562.9	0.0	1.257	1.047	81291.7	351265.5	23.1	B31.8	
1449	562.9	0.0	1.257	1.047	81291.7	351265.5	23.1	B31.8	
1450	603.9	0.0	1.257	1.047	81343.1	351265.5	23.2	B31.8	
1450	559.3	0.0	1.000	1.000	81298.5	351265.5	23.1	B31.8	
15098	560.6	0.0	1.000	1.000	81300.1	351265.5	23.1	B31.8	
15098	605.1	0.0	1.257	1.047	81344.6	351265.5	23.2	B31.8	
15099	637.7	0.0	1.257	1.047	81395.0	351265.5	23.2	B31.8	
15099	637.7	0.0	1.257	1.047	81395.0	351265.5	23.2	B31.8	
15100	680.7	0.0	1.257	1.047	81383.3	351265.5	23.2	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
15100	315.0	0.0	1.000	1.000	81017.6	351265.5	23.1	B31.8	
15110	320.9	0.0	1.000	1.000	81023.6	351265.5	23.1	B31.8	
15110	683.4	0.0	1.000	1.000	81367.5	351265.5	23.2	B31.8	
1460	1843.3	0.0	1.000	1.000	73034.5	351265.5	20.8	B31.8	
1460	1394.6	0.0	1.000	1.000	72616.7	351265.5	20.7	B31.8	
1470	2993.8	0.0	1.000	1.000	74215.9	351265.5	21.1	B31.8	
790	16.6	0.0	1.000	1.000	89733.3	351265.5	25.5	B31.8	
800	256.7	0.0	1.000	1.000	89973.4	351265.5	25.6	B31.8	
800	256.7	0.0	1.000	1.000	89973.3	351265.5	25.6	B31.8	
810	400.2	0.0	1.000	1.000	90116.8	351265.5	25.7	B31.8	
810	400.2	0.0	1.000	1.000	90116.7	351265.5	25.7	B31.8	
820	100.5	0.0	1.000	1.000	89817.0	351265.5	25.6	B31.8	
820	100.5	0.0	1.000	1.000	89816.9	351265.5	25.6	B31.8	
12000	40.2	0.0	2.521	3.028	89756.6	351265.5	25.6	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12000	3.7	0.0	2.521	3.028	89720.1	351265.5	25.5	B31.8	
829	1.0	0.0	1.000	1.000	89717.4	351265.5	25.5	B31.8	
829	1.0	0.0	1.000	1.000	89717.4	351265.5	25.5	B31.8	
830	0.0	0.0	1.000	1.000	89716.4	351265.5	25.5	B31.8	
12000	1007.6	0.0	2.521	3.028	81443.5	351265.5	23.2	B31.8	
831	537.9	0.0	1.000	1.000	80973.8	351265.5	23.1	B31.8	
831	537.9	0.0	1.000	1.000	80973.8	351265.5	23.1	B31.8	
832	623.1	0.0	1.000	1.000	81059.0	351265.5	23.1	B31.8	
832	623.1	0.0	1.000	1.000	81057.6	351265.5	23.1	B31.8	
12008	725.9	0.0	1.000	1.000	81218.5	351265.5	23.1	B31.8	
12008	780.1	0.0	1.257	1.047	81272.7	351265.5	23.1	B31.8	
12009	584.9	0.0	1.257	1.047	81139.0	351265.5	23.1	B31.8	
12009	584.9	0.0	1.257	1.047	81139.0	351265.5	23.1	B31.8	
12010	570.1	0.0	1.257	1.047	81232.3	351265.5	23.1	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12010	412.1	0.0	1.000	1.000	81074.3	351265.5	23.1	B31.8	
12015	418.9	0.0	1.000	1.000	81081.1	351265.5	23.1	B31.8	
12015	418.9	0.0	1.000	1.000	81081.1	351265.5	23.1	B31.8	
12017	2544.5	0.0	1.000	1.000	83206.8	351265.5	23.7	B31.8	
12017	2544.5	0.0	1.000	1.000	83206.8	351265.5	23.7	B31.8	
12018	166.6	0.0	1.000	1.000	80828.8	351265.5	23.0	B31.8	
12018	427.8	0.0	1.257	1.047	81090.0	351265.5	23.1	B31.8	
12019	901.5	0.0	1.257	1.047	81568.2	351265.5	23.2	B31.8	
12019	901.5	0.0	1.257	1.047	81568.2	351265.5	23.2	B31.8	
12020	1444.9	0.0	1.257	1.047	82116.8	351265.5	23.4	B31.8	
12020	755.0	0.0	1.000	1.000	81426.8	351265.5	23.2	B31.8	
12025	1579.8	0.0	1.000	1.000	82251.6	351265.5	23.4	B31.8	
12025	1579.8	0.0	1.000	1.000	82251.6	351265.5	23.4	B31.8	
12029	1582.6	0.0	1.257	1.047	82257.2	351265.5	23.4	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12029	1582.6	0.0	1.257	1.047	82257.2	351265.5	23.4	B31.8	
12030	1805.6	0.0	1.257	1.047	82478.9	351265.5	23.5	B31.8	
12030	1701.9	0.0	1.000	1.000	82375.3	351265.5	23.5	B31.8	
885	3495.8	0.0	1.000	1.000	84169.2	351265.5	24.0	B31.8	
885	3495.8	0.0	1.000	1.000	84169.2	351265.5	24.0	B31.8	
890	724.8	0.0	1.000	1.000	81398.1	351265.5	23.2	B31.8	
890	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	6214.3	0.0	1.000	1.000	86887.6	351265.5	24.7	B31.8	
910	4550.4	0.0	1.033	1.044	85223.8	351265.5	24.3	B31.8	
910	692.7	0.0	1.033	1.044	81381.9	351265.5	23.2	B31.8	
918	473.2	0.0	1.000	1.000	81162.4	351265.5	23.1	B31.8	
918	734.7	0.0	1.257	1.047	81423.9	351265.5	23.2	B31.8	
919	693.7	0.0	1.257	1.047	81411.0	351265.5	23.2	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
919	693.7	0.0	1.257	1.047	81411.0	351265.5	23.2	B31.8	
920	689.8	0.0	1.257	1.047	81426.2	351265.5	23.2	B31.8	
920	689.8	0.0	1.257	1.047	81426.2	351265.5	23.2	B31.8	
15009	677.6	0.0	1.257	1.047	81423.2	351265.5	23.2	B31.8	
15009	677.6	0.0	1.257	1.047	81423.2	351265.5	23.2	B31.8	
15010	750.2	0.0	1.257	1.047	81439.4	351265.5	23.2	B31.8	
15010	509.6	0.0	1.000	1.000	81198.9	351265.5	23.1	B31.8	
15020	514.4	0.0	1.000	1.000	81203.6	351265.5	23.1	B31.8	
15020	753.4	0.0	1.000	1.000	81424.7	351265.5	23.2	B31.8	
930	1996.5	0.0	1.000	1.000	73168.4	351265.5	20.8	B31.8	
930	1659.6	0.0	1.000	1.000	72861.4	351265.5	20.7	B31.8	
940	3148.4	0.0	1.000	1.000	74350.1	351265.5	21.2	B31.8	
680	74.8	0.0	1.000	1.000	89795.8	351265.5	25.6	B31.8	
14000	838.7	0.0	1.000	1.000	90559.8	351265.5	25.8	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14000	838.7	0.0	1.000	1.000	90559.8	351265.5	25.8	B31.8	
690	1463.7	0.0	1.000	1.000	91184.7	351265.5	26.0	B31.8	
690	1463.7	0.0	1.000	1.000	91184.8	351265.5	26.0	B31.8	
691	2567.4	0.0	1.000	1.000	92288.4	351265.5	26.3	B31.8	
691	2567.6	0.0	1.269	1.057	92288.6	351265.5	26.3	B31.8	
692	3476.5	0.0	1.269	1.057	93067.1	351265.5	26.5	B31.8	
692	3476.5	0.0	1.269	1.057	93065.1	351265.5	26.5	B31.8	
700	3953.3	0.0	1.269	1.057	93473.4	351265.5	26.6	B31.8	
700	3952.0	0.0	1.000	1.000	93469.1	351265.5	26.6	B31.8	
704	3975.1	0.0	1.000	1.000	93492.2	351265.5	26.6	B31.8	
704	3975.1	0.0	1.000	1.000	93492.2	351265.5	26.6	B31.8	
705	4042.3	0.0	1.000	1.000	93559.4	351265.5	26.6	B31.8	
705	4042.3	0.0	1.000	1.000	93557.9	351257.5	26.6	B31.8	
740	4062.5	0.0	1.000	1.000	93594.1	351257.5	26.6	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
740	4062.5	0.0	1.000	1.000	93594.1	351257.5	26.6	B31.8	
745	4284.9	0.0	1.000	1.000	93992.7	351257.5	26.8	B31.8	
745	4284.9	0.0	1.000	1.000	93992.7	351257.5	26.8	B31.8	
707	8180.3	0.0	2.521	3.028	97920.1	351257.5	27.9	B31.8	
707	8311.7	0.0	2.521	3.028	98063.4	351257.5	27.9	B31.8	
709	3810.8	0.0	1.269	1.057	93745.0	351257.5	26.7	B31.8	
709	3810.8	0.0	1.269	1.057	93745.0	351257.5	26.7	B31.8	
710	2132.8	0.0	1.269	1.057	91849.2	351257.5	26.1	B31.8	
710	2130.3	0.0	1.000	1.000	91846.7	351265.5	26.1	B31.8	
719	1474.4	0.0	1.269	1.057	90855.4	351265.5	25.9	B31.8	
719	1474.4	0.0	1.269	1.057	90855.4	351265.5	25.9	B31.8	
720	2483.9	0.0	1.269	1.057	91663.6	351265.5	26.1	B31.8	
720	2483.9	0.0	1.000	1.000	91663.6	351265.5	26.1	B31.8	
730	2483.9	0.0	1.000	1.000	91662.9	351265.5	26.1	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
730	2483.9	0.0	1.000	1.000	91662.9	351265.5	26.1	B31.8	
4000	2483.9	0.0	1.096	1.128	91623.1	351265.5	26.1	B31.8	
4000	2123.3	0.0	1.096	1.128	91839.7	351265.5	26.1	B31.8	
4100	1866.6	0.0	1.000	1.000	91583.0	351265.5	26.1	B31.8	
4100	1866.6	0.0	1.000	1.000	91583.0	351265.5	26.1	B31.8	
4110	1957.9	0.0	1.000	1.000	91674.3	351265.5	26.1	B31.8	
4110	1957.9	0.0	1.000	1.000	91674.3	351265.5	26.1	B31.8	
4120	1693.0	0.0	1.000	1.000	91409.4	351265.5	26.0	B31.8	
4120	1693.0	0.0	1.000	1.000	91409.4	351265.5	26.0	B31.8	
4130	4844.1	0.0	1.000	1.000	94560.5	351265.5	26.9	B31.8	
4130	4844.1	0.0	1.000	1.000	94560.5	351265.5	26.9	B31.8	
4140	1509.7	0.0	1.096	1.128	91226.0	351265.5	26.0	B31.8	
4140	1564.4	0.0	1.096	1.128	91270.9	351265.5	26.0	B31.8	
7199	1668.9	0.0	1.269	1.057	91407.2	351265.5	26.0	B31.8	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7199	1668.9	0.0	1.269	1.057	91407.2	351265.5	26.0	B31.8	
7200	1856.0	0.0	1.269	1.057	91572.4	351265.5	26.1	B31.8	
7200	1784.1	0.0	1.000	1.000	91500.5	351265.5	26.0	B31.8	
7210	4543.8	0.0	1.000	1.000	94260.2	351265.5	26.8	B31.8	
7210	4543.8	0.0	1.000	1.000	94260.2	351265.5	26.8	B31.8	
7220	831.7	0.0	1.000	1.000	90548.0	351265.5	25.8	B31.8	
7220	831.7	0.0	1.000	1.000	90548.0	351265.5	25.8	B31.8	
7230	3341.0	0.0	1.000	1.000	93057.4	351265.5	26.5	B31.8	
7230	3341.0	0.0	1.000	1.000	93057.4	351265.5	26.5	B31.8	
7240	538.1	0.0	1.096	1.128	90254.5	351265.5	25.7	B31.8	
7240	2195.3	0.0	1.096	1.128	91911.7	351265.5	26.2	B31.8	
7600	406.9	0.0	1.000	1.000	90123.3	351265.5	25.7	B31.8	
7600	426.1	0.0	1.000	1.000	90208.4	351265.5	25.7	B31.8	
7610	4337.2	0.0	1.000	1.000	94118.8	351265.5	26.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7610	4328.3	0.0	1.000	1.000	93990.3	351265.5	26.8	B31.8	
7615	6596.9	0.0	1.000	1.000	96258.9	351265.5	27.4	B31.8	
7615	6602.7	0.0	1.000	1.000	96189.7	351265.5	27.4	B31.8	
7620	6183.3	0.0	1.000	1.000	94337.5	351265.5	26.9	B31.8	
7620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	2325.9	0.0	1.000	1.000	90590.4	351265.5	25.8	B31.8	
7660	575.6	0.0	1.000	1.000	88840.1	351265.5	25.3	B31.8	
7660	575.6	0.0	1.000	1.000	88840.1	351265.5	25.3	B31.8	
7670	9410.8	0.0	1.000	1.000	97675.4	351265.5	27.8	B31.8	
7670	9410.8	0.0	1.000	1.000	97675.4	351265.5	27.8	B31.8	
7679	807.5	0.0	1.257	1.048	89072.0	351265.5	25.4	B31.8	
7679	807.5	0.0	1.257	1.048	89072.0	351265.5	25.4	B31.8	
7680	1265.2	0.0	1.257	1.048	89529.7	351265.5	25.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7680	1261.9	0.0	1.000	1.000	89526.5	351265.5	25.5	B31.8	
7690	4106.9	0.0	1.000	1.000	92371.4	351265.5	26.3	B31.8	
7690	4106.9	0.0	1.000	1.000	92371.4	351265.5	26.3	B31.8	
7699	1026.9	0.0	1.257	1.048	89291.5	351265.5	25.4	B31.8	
7699	1026.9	0.0	1.257	1.048	89291.5	351265.5	25.4	B31.8	
7700	2315.2	0.0	1.257	1.048	90579.7	351265.5	25.8	B31.8	
7700	2315.1	0.0	1.000	1.000	90579.7	351265.5	25.8	B31.8	
7708	2378.2	0.0	1.000	1.000	90642.7	351265.5	25.8	B31.8	
7708	2378.2	0.0	1.257	1.048	90642.7	351265.5	25.8	B31.8	
7709	1071.1	0.0	1.257	1.048	89335.6	351265.5	25.4	B31.8	
7709	1071.1	0.0	1.257	1.048	89335.6	351265.5	25.4	B31.8	
7710	2363.0	0.0	1.257	1.048	90627.5	351265.5	25.8	B31.8	
7710	2357.3	0.0	1.000	1.000	90621.8	351265.5	25.8	B31.8	
7720	4073.1	0.0	1.000	1.000	92337.6	351265.5	26.3	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7720	4073.1	0.0	1.000	1.000	92337.6	351265.5	26.3	B31.8	
7728	794.6	0.0	1.000	1.000	89059.1	351265.5	25.4	B31.8	
7728	811.4	0.0	1.257	1.048	89075.9	351265.5	25.4	B31.8	
7729	289.5	0.0	1.257	1.048	88554.0	351265.5	25.2	B31.8	
7729	289.5	0.0	1.257	1.048	88554.0	351265.5	25.2	B31.8	
7730	781.5	0.0	1.257	1.048	89046.1	351265.5	25.4	B31.8	
7730	781.5	0.0	1.000	1.000	89046.1	351265.5	25.4	B31.8	
7740	9724.8	0.0	1.000	1.000	97989.3	351265.5	27.9	B31.8	
7740	9724.8	0.0	1.000	1.000	97989.3	351265.5	27.9	B31.8	
7750	22.7	0.0	1.000	1.000	88287.3	351265.5	25.1	B31.8	
7750	22.7	0.0	1.000	1.000	88287.3	351265.5	25.1	B31.8	
7760	2491.4	0.0	1.000	1.000	90756.0	351265.5	25.8	B31.8	
7760	2491.4	0.0	1.000	1.000	90756.0	351265.5	25.8	B31.8	
7770	1222.0	0.0	1.000	1.000	89486.5	351265.5	25.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7770	1222.0	0.0	1.000	1.000	89486.5	351265.5	25.5	B31.8	
7780	841.0	0.0	1.000	1.000	89105.5	351265.5	25.4	B31.8	
7780	841.0	0.0	1.000	1.000	89105.5	351265.5	25.4	B31.8	
7790	1843.2	0.0	1.000	1.000	90107.8	351265.5	25.7	B31.8	
7790	1843.2	0.0	1.000	1.000	90107.8	351265.5	25.7	B31.8	
7800	2009.8	0.0	1.000	1.000	90274.3	351265.5	25.7	B31.8	
7800	2009.8	0.0	1.000	1.000	90274.3	351265.5	25.7	B31.8	
7810	1969.4	0.0	1.000	1.000	90233.9	351265.5	25.7	B31.8	
7810	1969.4	0.0	1.000	1.000	90233.9	351265.5	25.7	B31.8	
7820	1969.8	0.0	1.000	1.000	90234.3	351265.5	25.7	B31.8	
7820	1969.8	0.0	1.000	1.000	90234.3	351265.5	25.7	B31.8	
7830	2008.6	0.0	1.000	1.000	90273.1	351265.5	25.7	B31.8	
7830	2008.6	0.0	1.000	1.000	90273.1	351265.5	25.7	B31.8	
7840	1847.6	0.0	1.000	1.000	90112.1	351265.5	25.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7840	1847.6	0.0	1.000	1.000	90112.1	351265.5	25.7	B31.8	
7850	723.3	0.0	1.000	1.000	88987.8	351265.5	25.3	B31.8	
7850	723.3	0.0	1.000	1.000	88987.8	351265.5	25.3	B31.8	
7860	1344.9	0.0	1.000	1.000	89609.4	351265.5	25.5	B31.8	
7860	1344.9	0.0	1.000	1.000	89609.4	351265.5	25.5	B31.8	
7870	2474.6	0.0	1.000	1.000	90739.2	351265.5	25.8	B31.8	
7870	2474.6	0.0	1.000	1.000	90739.2	351265.5	25.8	B31.8	
7880	42.7	0.0	1.000	1.000	88307.2	351265.5	25.1	B31.8	
7880	42.7	0.0	1.000	1.000	88307.2	351257.5	25.1	B31.8	
7890	0.0	0.0	1.000	1.000	88264.5	351257.5	25.1	B31.8	
7240	1680.5	0.0	1.096	1.128	91396.9	351265.5	26.0	B31.8	
7250	2621.5	0.0	1.000	1.000	92337.9	351265.5	26.3	B31.8	
7250	2621.8	0.0	1.000	1.000	92307.2	351265.5	26.3	B31.8	
7260	7912.9	0.0	1.000	1.000	97530.9	351265.5	27.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7260	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	3577.4	0.0	1.000	1.000	93239.5	351265.5	26.5	B31.8	
7280	2910.5	0.0	1.000	1.000	92572.5	351265.5	26.4	B31.8	
7280	2910.5	0.0	1.000	1.000	92572.5	351265.5	26.4	B31.8	
7290	1774.1	0.0	1.000	1.000	91436.1	351265.5	26.0	B31.8	
7290	1774.1	0.0	1.000	1.000	91436.1	351265.5	26.0	B31.8	
7295	545.5	0.0	1.000	1.000	90207.5	351265.5	25.7	B31.8	
7295	545.5	0.0	1.000	1.000	90207.5	351265.5	25.7	B31.8	
7300	1218.6	0.0	1.000	1.000	90880.6	351265.5	25.9	B31.8	
7300	1218.6	0.0	1.000	1.000	90880.6	351265.5	25.9	B31.8	
7320	1647.2	0.0	1.000	1.000	91309.3	351265.5	26.0	B31.8	
7320	1647.2	0.0	1.000	1.000	91309.3	351265.5	26.0	B31.8	
7330	1532.6	0.0	1.000	1.000	91194.6	351265.5	26.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7330	1532.6	0.0	1.000	1.000	91194.6	351265.5	26.0	B31.8	
7340	1587.1	0.0	1.000	1.000	91249.1	351265.5	26.0	B31.8	
7340	1587.1	0.0	1.000	1.000	91249.1	351265.5	26.0	B31.8	
7350	1472.0	0.0	1.000	1.000	91134.1	351265.5	25.9	B31.8	
7350	1472.0	0.0	1.000	1.000	91134.1	351265.5	25.9	B31.8	
7370	1902.4	0.0	1.000	1.000	91564.4	351265.5	26.1	B31.8	
7370	1902.4	0.0	1.000	1.000	91564.4	351265.5	26.1	B31.8	
7373	765.2	0.0	1.000	1.000	90427.3	351265.5	25.7	B31.8	
7373	765.2	0.0	1.000	1.000	90427.3	351265.5	25.7	B31.8	
7376	468.7	0.0	1.000	1.000	90130.7	351265.5	25.7	B31.8	
7376	468.7	0.0	1.000	1.000	90130.7	351265.5	25.7	B31.8	
7380	203.8	0.0	1.000	1.000	89865.8	351265.5	25.6	B31.8	
7380	203.8	0.0	1.000	1.000	89865.8	351265.5	25.6	B31.8	
7400	6932.3	0.0	1.000	1.000	96594.3	351265.5	27.5	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7400	6932.3	0.0	1.000	1.000	96594.3	351265.5	27.5	B31.8	
7409	622.9	0.0	1.268	1.057	90284.9	351265.5	25.7	B31.8	
7409	622.9	0.0	1.268	1.057	90284.9	351265.5	25.7	B31.8	
7410	856.6	0.0	1.268	1.057	90518.6	351265.5	25.8	B31.8	
7410	799.1	0.0	1.000	1.000	90461.2	351265.5	25.8	B31.8	
7415	3348.9	0.0	1.000	1.000	93011.0	351265.5	26.5	B31.8	
7415	3348.9	0.0	1.000	1.000	93011.0	351265.5	26.5	B31.8	
7419	782.0	0.0	1.268	1.057	90444.0	351265.5	25.7	B31.8	
7419	782.0	0.0	1.268	1.057	90444.0	351265.5	25.7	B31.8	
7420	1989.9	0.0	1.268	1.057	91651.9	351265.5	26.1	B31.8	
7420	1989.8	0.0	1.000	1.000	91651.9	351265.5	26.1	B31.8	
7430	6823.9	0.0	1.000	1.000	96486.0	351265.5	27.5	B31.8	
7430	6823.9	0.0	1.000	1.000	96486.0	351265.5	27.5	B31.8	
7438	2019.4	0.0	1.000	1.000	91681.4	351265.5	26.1	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7438	2019.4	0.0	1.268	1.057	91681.5	351265.5	26.1	B31.8	
7439	817.2	0.0	1.268	1.057	90479.2	351265.5	25.8	B31.8	
7439	817.2	0.0	1.268	1.057	90479.2	351265.5	25.8	B31.8	
7440	2504.2	0.0	1.268	1.057	92166.3	351265.5	26.2	B31.8	
7440	2489.3	0.0	1.000	1.000	92151.4	351265.5	26.2	B31.8	
7445	3362.2	0.0	1.000	1.000	93024.3	351265.5	26.5	B31.8	
7445	3362.2	0.0	1.000	1.000	93024.3	351265.5	26.5	B31.8	
7449	550.1	0.0	1.268	1.057	90212.1	351265.5	25.7	B31.8	
7449	550.1	0.0	1.268	1.057	90212.1	351265.5	25.7	B31.8	
7450	1181.8	0.0	1.268	1.057	90843.8	351265.5	25.9	B31.8	
7450	1181.8	0.0	1.000	1.000	90843.8	351265.5	25.9	B31.8	
7460	6943.4	0.0	1.000	1.000	96605.5	351265.5	27.5	B31.8	
7460	6943.4	0.0	1.000	1.000	96605.5	351265.5	27.5	B31.8	
7480	644.5	0.0	1.000	1.000	90306.5	351265.5	25.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7480	644.5	0.0	1.000	1.000	90306.5	351265.5	25.7	B31.8	
7482	368.8	0.0	1.000	1.000	90030.9	351265.5	25.6	B31.8	
7482	368.8	0.0	1.000	1.000	90030.9	351265.5	25.6	B31.8	
7485	747.5	0.0	1.000	1.000	90409.6	351265.5	25.7	B31.8	
7485	747.5	0.0	1.000	1.000	90409.6	351265.5	25.7	B31.8	
7490	33.7	0.0	1.000	1.000	89695.7	351265.5	25.5	B31.8	
7490	33.7	0.0	1.000	1.000	89695.7	351265.5	25.5	B31.8	
7500	0.0	0.0	1.000	1.000	89662.0	351265.5	25.5	B31.8	
4140	205.9	0.0	1.096	1.128	89922.3	351265.5	25.6	B31.8	
4150	0.0	0.0	1.000	1.000	89716.4	351265.5	25.5	B31.8	
4000	1911.3	0.0	1.096	1.128	91627.6	351265.5	26.1	B31.8	
4005	2996.8	0.0	1.000	1.000	92713.2	351265.5	26.4	B31.8	
4005	2996.8	0.0	1.000	1.000	92713.2	351265.5	26.4	B31.8	
4010	740.5	0.0	1.000	1.000	90456.9	351265.5	25.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
4010	740.5	0.0	1.000	1.000	90456.9	351265.5	25.8	B31.8	
4020	1704.6	0.0	1.000	1.000	91420.9	351265.5	26.0	B31.8	
4020	1704.6	0.0	1.000	1.000	91420.9	351265.5	26.0	B31.8	
4030	978.7	0.0	1.000	1.000	90695.1	351265.5	25.8	B31.8	
4030	978.7	0.0	1.000	1.000	90695.1	351265.5	25.8	B31.8	
4040	2440.0	0.0	1.000	1.000	92156.4	351265.5	26.2	B31.8	
4040	2440.0	0.0	1.000	1.000	92156.4	351265.5	26.2	B31.8	
4050	2755.7	0.0	1.000	1.000	92472.1	351265.5	26.3	B31.8	
4050	2755.7	0.0	1.000	1.000	92472.1	351265.5	26.3	B31.8	
7000	368.7	0.0	1.000	1.000	90085.1	351265.5	25.6	B31.8	
7000	368.7	0.0	1.000	1.000	90085.1	351265.5	25.6	B31.8	
7010	5450.9	0.0	1.000	1.000	95167.2	351265.5	27.1	B31.8	
7010	5450.9	0.0	1.000	1.000	95167.2	351265.5	27.1	B31.8	
7032	392.1	0.0	1.000	1.000	90108.4	351265.5	25.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7032	1077.3	0.0	1.269	1.057	90793.6	351265.5	25.8	B31.8	
7031	917.9	0.0	1.269	1.057	90634.2	351265.5	25.8	B31.8	
7031	917.9	0.0	1.269	1.057	90634.2	351265.5	25.8	B31.8	
7030	371.3	0.0	1.269	1.057	90087.7	351265.5	25.6	B31.8	
7030	371.3	0.0	1.000	1.000	90087.7	351265.5	25.6	B31.8	
7040	6507.8	0.0	1.000	1.000	96224.1	351265.5	27.4	B31.8	
7040	6507.8	0.0	1.000	1.000	96224.1	351265.5	27.4	B31.8	
7050	2662.6	0.0	1.000	1.000	92379.0	351265.5	26.3	B31.8	
7050	2662.6	0.0	1.000	1.000	92379.0	351265.5	26.3	B31.8	
7060	1126.8	0.0	1.000	1.000	90843.2	351265.5	25.9	B31.8	
7060	1126.8	0.0	1.000	1.000	90843.2	351265.5	25.9	B31.8	
7070	933.0	0.0	1.000	1.000	90649.4	351265.5	25.8	B31.8	
7070	933.0	0.0	1.000	1.000	90649.4	351265.5	25.8	B31.8	
7080	3167.1	0.0	1.000	1.000	92883.5	351265.5	26.4	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7080	3167.1	0.0	1.000	1.000	92883.5	351265.5	26.4	B31.8	
7090	142.8	0.0	1.000	1.000	89859.1	351265.5	25.6	B31.8	
7090	142.8	0.0	1.000	1.000	89859.1	351265.5	25.6	B31.8	
7100	11.4	0.0	1.000	1.000	89727.8	351265.5	25.5	B31.8	
7100	11.4	0.0	1.000	1.000	89727.8	351265.5	25.5	B31.8	
7110	0.0	0.0	1.000	1.000	89716.4	351265.5	25.5	B31.8	
570	5488.6	0.0	1.033	1.044	86141.5	351265.5	24.5	B31.8	
578	1706.8	0.0	1.000	1.000	82359.7	351265.5	23.4	B31.8	
578	1809.0	0.0	1.257	1.047	82461.9	351265.5	23.5	B31.8	
579	1525.1	0.0	1.257	1.047	82051.5	351265.5	23.4	B31.8	
579	1525.1	0.0	1.257	1.047	82051.5	351265.5	23.4	B31.8	
580	1569.0	0.0	1.257	1.047	82071.7	351265.5	23.4	B31.8	
580	1569.0	0.0	1.257	1.047	82071.7	351265.5	23.4	B31.8	
16009	1652.9	0.0	1.257	1.047	82207.6	351265.5	23.4	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
16009	1652.9	0.0	1.257	1.047	82207.6	351265.5	23.4	B31.8	
16010	1916.8	0.0	1.257	1.047	82569.7	351265.5	23.5	B31.8	
16010	1734.6	0.0	1.000	1.000	82387.5	351265.5	23.5	B31.8	
16020	1739.6	0.0	1.000	1.000	82392.6	351265.5	23.5	B31.8	
16020	1921.3	0.0	1.000	1.000	82594.7	351265.5	23.5	B31.8	
590	4361.9	0.0	1.000	1.000	75536.9	351265.5	21.5	B31.8	
590	4048.0	0.0	1.000	1.000	75194.7	351265.5	21.4	B31.8	
600	5113.9	0.0	1.000	1.000	76260.6	351265.5	21.7	B31.8	
350	6558.8	0.0	1.482	1.642	46234.0	363750.0	12.7	B31.8	
15000	1543.0	0.0	1.482	1.642	41218.2	363750.0	11.3	B31.8	
15000	54.8	0.0	1.482	1.642	39763.3	363750.0	10.9	B31.8	
379	24.7	0.0	1.000	1.000	39733.2	363750.0	10.9	B31.8	
379	24.7	0.0	1.000	1.000	39733.2	363750.0	10.9	B31.8	
380	0.0	0.0	1.000	1.000	39708.5	363750.0	10.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
15000	4882.3	0.0	1.482	1.642	44280.7	363750.0	12.2	B31.8	
382	3434.6	0.0	1.000	1.000	42833.0	363750.0	11.8	B31.8	
382	3434.6	0.0	1.000	1.000	42833.0	363750.0	11.8	B31.8	
383	2573.7	0.0	1.000	1.000	41972.1	363750.0	11.5	B31.8	
383	2573.7	0.0	1.000	1.000	41968.1	363750.0	11.5	B31.8	
1008	2581.3	0.0	1.000	1.000	42030.2	363750.0	11.6	B31.8	
1008	3351.0	0.0	2.004	1.670	42799.9	363750.0	11.8	B31.8	
1009	4936.1	0.0	2.004	1.670	44686.6	363750.0	12.3	B31.8	
1009	4936.1	0.0	2.004	1.670	44686.6	363750.0	12.3	B31.8	
1010	10174.0	0.0	2.004	1.670	50565.8	363750.0	13.9	B31.8	
1010	6592.1	0.0	1.000	1.000	46984.0	363750.0	12.9	B31.8	
980	6645.2	0.0	1.000	1.000	47037.1	363750.0	12.9	B31.8	
980	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
970	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
970	208.1	0.0	1.000	1.000	21220.2	351257.5	6.0	B31.8	
958	165.8	0.0	1.000	1.000	21177.8	351257.5	6.0	B31.8	
958	1373.1	0.0	1.315	1.096	22385.1	351257.5	6.4	B31.8	
959	2987.1	0.0	1.315	1.096	23991.0	351257.5	6.8	B31.8	
959	2987.1	0.0	1.315	1.096	23991.0	351257.5	6.8	B31.8	
960	5355.8	0.0	1.315	1.096	26347.0	351257.5	7.5	B31.8	
960	3174.6	0.0	1.000	1.000	24165.9	351257.5	6.9	B31.8	
965	9693.5	0.0	1.000	1.000	30684.8	351257.5	8.7	B31.8	
965	9693.5	0.0	1.000	1.000	30684.8	351257.5	8.7	B31.8	
910	4518.9	0.0	1.033	1.044	25510.1	351257.5	7.3	B31.8	
80	29751.1	0.0	3.577	3.577	123021.9	363758.3	33.8	B31.8	
81	8637.6	0.0	1.000	1.000	101908.4	363758.3	28.0	B31.8	
81	8637.6	0.0	1.000	1.000	101908.4	363758.3	28.0	B31.8	
83	19547.4	0.0	3.577	3.577	112818.1	363758.3	31.0	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
83	2328.2	0.0	3.577	3.577	43538.2	363750.0	12.0	B31.8	
2199	2565.0	0.0	2.065	1.721	44054.9	363750.0	12.1	B31.8	
2199	2565.0	0.0	2.065	1.721	44054.9	363750.0	12.1	B31.8	
2200	3447.0	0.0	2.065	1.721	44845.4	363750.0	12.3	B31.8	
2200	2220.9	0.0	1.000	1.000	43619.4	363750.0	12.0	B31.8	
2205	5316.9	0.0	1.000	1.000	46715.4	363750.0	12.8	B31.8	
2205	5316.9	0.0	1.000	1.000	46715.4	363750.0	12.8	B31.8	
2211	1039.0	0.0	2.065	1.721	42434.7	363750.0	11.7	B31.8	
2211	1039.0	0.0	2.065	1.721	42434.7	363750.0	11.7	B31.8	
2210	1081.0	0.0	2.065	1.721	42484.2	363750.0	11.7	B31.8	
2210	638.4	0.0	1.000	1.000	42041.6	363750.0	11.6	B31.8	
2214	1051.2	0.0	2.065	1.721	42467.6	363750.0	11.7	B31.8	
2214	1051.2	0.0	2.065	1.721	42467.6	363750.0	11.7	B31.8	
2215	1611.4	0.0	2.065	1.721	43039.2	363750.0	11.8	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2215	1150.1	0.0	1.000	1.000	42577.8	363750.0	11.7	B31.8	
2220	6753.6	0.0	1.000	1.000	48181.3	363750.0	13.2	B31.8	
2220	6753.6	0.0	1.000	1.000	48181.3	363750.0	13.2	B31.8	
2225	3028.4	0.0	1.518	1.691	44456.1	363750.0	12.2	B31.8	
83	19555.8	0.0	3.577	3.577	112828.1	363750.0	31.0	B31.8	
105	6407.4	0.0	1.000	1.000	99679.8	363750.0	27.4	B31.8	
105	6407.4	0.0	1.000	1.000	99679.8	363750.0	27.4	B31.8	
110	2112.5	0.0	1.000	1.000	95384.8	363750.0	26.2	B31.8	
110	2112.5	0.0	1.000	1.000	95384.8	363750.0	26.2	B31.8	
85	1385.2	0.0	2.464	2.952	94657.5	363750.0	26.0	B31.8	
85	12572.3	0.0	2.464	2.952	52305.7	363750.0	14.4	B31.8	
338	1344.2	0.0	1.000	1.000	41077.5	363750.0	11.3	B31.8	
338	5737.4	0.0	1.966	1.639	45470.7	363750.0	12.5	B31.8	
339	4936.8	0.0	1.966	1.639	44727.7	363750.0	12.3	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
339	4936.8	0.0	1.966	1.639	44727.7	363750.0	12.3	B31.8	
360	3412.8	0.0	1.966	1.639	43213.0	363750.0	11.9	B31.8	
360	2206.3	0.0	1.000	1.000	42006.5	363750.0	11.5	B31.8	
341	4018.8	0.0	1.966	1.639	44113.1	363750.0	12.1	B31.8	
341	4018.8	0.0	1.966	1.639	44113.1	363750.0	12.1	B31.8	
340	4583.3	0.0	1.966	1.639	44717.5	363750.0	12.3	B31.8	
340	3281.5	0.0	1.000	1.000	43415.7	363750.0	11.9	B31.8	
346	2891.1	0.0	1.000	1.000	42999.5	363750.0	11.8	B31.8	
346	2891.1	0.0	1.000	1.000	43000.0	363750.0	11.8	B31.8	
349	2031.7	0.0	1.000	1.000	42140.6	363750.0	11.6	B31.8	
349	2031.7	0.0	1.000	1.000	42140.6	363750.0	11.6	B31.8	
350	1554.0	0.0	1.482	1.642	41662.9	363750.0	11.5	B31.8	
2225	2078.3	0.0	1.518	1.691	43494.0	363750.0	12.0	B31.8	
2300	1796.8	0.0	1.518	1.691	43212.5	363750.0	11.9	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2300	6708.3	0.0	1.518	1.691	33391.4	363750.0	9.2	B31.8	
3200	5781.1	0.0	1.000	1.000	32540.3	363750.0	8.9	B31.8	
3200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	5935.3	0.0	1.000	1.000	33172.3	363750.0	9.1	B31.8	
3220	6033.6	0.0	1.000	1.000	33295.9	363750.0	9.2	B31.8	
3220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3250	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3250	5154.1	0.0	1.854	1.854	38389.8	363750.0	10.6	B31.8	
3260	1931.1	0.0	1.854	1.854	62317.2	363750.0	17.1	B31.8	
3260	2521.5	-629.6	1.000	1.000	2690.1	137895.1	2.0	B31.3	
3280	3715.4	629.6	1.000	1.000	3884.0	137895.1	2.8	B31.3	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	7456.4	-629.6	2.919	2.433	7625.0	137895.1	5.5	B31.3	
3299	2683.9	-221.5	2.919	2.433	2856.5	137895.1	2.1	B31.3	
3299	2683.9	221.5	2.919	2.433	2856.5	137895.1	2.1	B31.3	
3300	4320.6	-82.6	2.919	2.433	4493.6	137895.1	3.3	B31.3	
3300	1763.6	82.6	1.000	1.000	1936.6	137895.1	1.4	B31.3	
3309	16721.1	1446.6	2.919	2.433	16862.4	137895.1	12.2	B31.3	
3309	16714.3	-1446.6	2.919	2.433	16855.6	137895.1	12.2	B31.3	
3310	16934.3	2868.6	2.919	2.433	17234.7	137895.1	12.5	B31.3	
3310	5993.7	-2868.6	1.000	1.000	6294.1	137895.1	4.6	B31.3	
3320	49265.9	1942.5	6.043	7.724	49646.9	137895.1	36.0	B31.3	
2300	881.5	0.0	1.518	1.691	42298.5	183754.2	23.0	B31.8	
2310	804.1	0.0	1.518	1.691	42221.1	183754.2	23.0	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2310	4557.9	0.0	1.518	1.691	31245.2	363750.0	8.6	B31.8	
2320	5099.6	0.0	1.000	1.000	31862.9	363750.0	8.8	B31.8	
2320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2500	5839.3	0.0	1.000	1.000	33080.5	363750.0	9.1	B31.8	
2504	6294.4	0.0	1.000	1.000	33560.9	363750.0	9.2	B31.8	
2504	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	5100.0	0.0	1.854	1.854	38326.5	363750.0	10.5	B31.8	
2520	1896.6	0.0	1.854	1.854	62278.3	363750.0	17.1	B31.8	
2520	2435.7	-692.1	1.000	1.000	2592.3	137895.1	1.9	B31.3	
2540	3616.6	692.1	1.000	1.000	3773.2	137895.1	2.7	B31.3	

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NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
2545	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
2545	7209.4	-692.1	2.919	2.433	7366.0	137895.1	5.3	B31.3	
2551	2902.7	-130.8	2.919	2.433	3074.1	137895.1	2.2	B31.3	
2551	2887.0	130.8	2.919	2.433	3058.4	137895.1	2.2	B31.3	
2550	4299.4	-20.0	2.919	2.433	4494.4	137895.1	3.3	B31.3	
2550	1721.4	20.0	1.000	1.000	1916.3	137895.1	1.4	B31.3	
2548	4242.7	-20.0	1.000	1.000	4438.5	137895.1	3.2	B31.3	
2548	11111.6	18.4	2.919	2.433	11293.0	137895.1	8.2	B31.3	
2549	16153.6	1546.1	2.919	2.433	16286.8	137895.1	11.8	B31.3	
2549	16153.5	-1546.1	2.919	2.433	16286.7	137895.1	11.8	B31.3	
2555	16262.4	2954.3	2.919	2.433	16562.5	137895.1	12.0	B31.3	
2555	5758.1	-2954.3	1.000	1.000	6058.1	137895.1	4.4	B31.3	
2560	49559.8	2000.6	6.043	7.724	49941.9	137895.1	36.2	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2560	344.7	0.0	6.043	7.724	548.2	137895.1	0.4	B31.3	
6120	94.6	-0.0	1.000	1.000	298.1	137895.1	0.2	B31.3	
3120	2122.0	0.0	6.043	7.724	2325.5	137895.1	1.7	B31.3	
3320	2121.9	-0.0	6.043	7.724	2325.4	137895.1	1.7	B31.3	
3320	821.1	0.0	6.043	7.724	1024.6	137895.1	0.7	B31.3	
6120	94.6	-0.0	1.000	1.000	298.1	137895.1	0.2	B31.3	
3120	13736.4	-0.0	6.043	7.724	13940.0	137895.1	10.1	B31.3	
5260	1089.1	0.0	1.000	1.000	1292.7	137895.1	0.9	B31.3	
5260	1089.1	0.0	1.000	1.000	1292.7	137895.1	0.9	B31.3	
6100	7302.0	0.0	1.000	1.000	7505.6	137895.1	5.4	B31.3	
6100	7302.0	0.0	1.000	1.000	7505.6	137895.1	5.4	B31.3	
6110	0.0	0.0	1.000	1.000	203.5	137895.1	0.1	B31.3	
5620	12608.9	0.0	6.043	7.724	12812.4	137895.1	9.3	B31.3	
6130	0.0	-0.0	1.000	1.000	203.5	137895.1	0.1	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2225	2173.5	0.0	1.518	1.691	43579.2	363750.0	12.0	B31.8	
2240	1208.6	0.0	1.518	1.691	42614.4	363750.0	11.7	B31.8	
2240	5928.0	0.0	1.518	1.691	32593.2	363750.0	9.0	B31.8	
3000	5278.0	0.0	1.000	1.000	32019.3	363750.0	8.8	B31.8	
3000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	5600.2	0.0	1.000	1.000	32819.3	363750.0	9.0	B31.8	
3020	5808.7	0.0	1.000	1.000	33053.1	363750.0	9.1	B31.8	
3020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	4427.5	0.0	1.854	1.854	37647.9	363750.0	10.3	B31.8	
3060	1792.4	0.0	1.854	1.854	62171.2	363750.0	17.1	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3060	2376.9	-508.2	1.000	1.000	2530.9	137895.1	1.8	B31.3	
3080	3605.0	508.2	1.000	1.000	3759.0	137895.1	2.7	B31.3	
3080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	7443.2	-508.2	2.919	2.433	7597.2	137895.1	5.5	B31.3	
3099	2302.9	-320.5	2.919	2.433	2460.5	137895.1	1.8	B31.3	
3099	2302.9	320.5	2.919	2.433	2460.5	137895.1	1.8	B31.3	
3100	4691.0	-121.8	2.919	2.433	4857.3	137895.1	3.5	B31.3	
3100	1922.0	121.8	1.000	1.000	2088.3	137895.1	1.5	B31.3	
3108	4426.2	-121.8	1.000	1.000	4592.5	137895.1	3.3	B31.3	
3108	11752.0	121.8	2.919	2.433	11918.3	137895.1	8.6	B31.3	
3109	16902.6	1445.8	2.919	2.433	17035.2	137895.1	12.4	B31.3	
3109	16902.6	-1445.8	2.919	2.433	17035.2	137895.1	12.4	B31.3	
3110	16904.7	2905.0	2.919	2.433	17186.8	137895.1	12.5	B31.3	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3110	5994.8	-2905.0	1.000	1.000	6277.0	137895.1	4.6	B31.3	
3120	48697.7	1967.2	6.043	7.724	49059.1	137895.1	35.6	B31.3	
2240	300.5	0.0	1.518	1.691	41713.6	363750.0	11.5	B31.8	
5000	0.0	0.0	1.000	1.000	41413.1	363750.0	11.4	B31.8	
85	3124.6	0.0	2.464	2.952	96434.8	363758.3	26.5	B31.8	
89	167.0	0.0	2.063	1.720	93568.4	363758.3	25.7	B31.8	
89	167.0	0.0	2.063	1.720	93568.4	363758.3	25.7	B31.8	
90	177.5	0.0	2.063	1.720	93521.0	363758.3	25.7	B31.8	
90	89.7	0.0	1.000	1.000	93433.2	363758.3	25.7	B31.8	
100	87.1	0.0	1.000	1.000	93429.7	363758.3	25.7	B31.8	
100	87.1	0.0	1.000	1.000	93428.9	363758.3	25.7	B31.8	
101	303.7	0.0	1.000	1.000	93645.5	363758.3	25.7	B31.8	
101	480.3	0.0	2.063	1.720	93821.0	363758.3	25.8	B31.8	
102	526.4	0.0	2.063	1.720	93872.2	363758.3	25.8	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
102	526.4	0.0	2.063	1.720	93871.5	363758.3	25.8	B31.8	
9100	228.4	0.0	2.063	1.720	93539.4	363758.3	25.7	B31.8	
9100	144.5	0.0	1.000	1.000	93455.1	363758.3	25.7	B31.8	
9101	474.2	0.0	1.000	1.000	93784.8	363758.3	25.8	B31.8	
9101	474.2	0.0	1.000	1.000	93784.1	363758.3	25.8	B31.8	
11000	205.1	0.0	1.000	1.000	93515.0	363758.3	25.7	B31.8	
11000	205.1	0.0	1.000	1.000	93513.7	363758.3	25.7	B31.8	
11010	42.9	0.0	1.000	1.000	93351.5	363758.3	25.7	B31.8	
11010	42.9	0.0	1.000	1.000	93350.0	363758.3	25.7	B31.8	
11020	17.4	0.0	1.000	1.000	93324.5	363758.3	25.7	B31.8	
11020	17.4	0.0	1.000	1.000	93323.0	363758.3	25.7	B31.8	
11030	66.4	0.0	1.000	1.000	93371.9	363758.3	25.7	B31.8	
11030	66.4	0.0	1.000	1.000	93370.5	363758.3	25.7	B31.8	
11040	562.2	0.0	1.000	1.000	93866.3	363758.3	25.8	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11040	562.2	0.0	1.000	1.000	93865.5	363758.3	25.8	B31.8	
11041	143.2	0.0	1.000	1.000	93446.6	363758.3	25.7	B31.8	
11041	213.9	0.0	2.063	1.720	93517.1	363758.3	25.7	B31.8	
11042	336.4	0.0	2.063	1.720	93684.0	363758.3	25.8	B31.8	
11042	336.4	0.0	2.063	1.720	93684.4	363758.3	25.8	B31.8	
9110	414.3	0.0	2.063	1.720	93767.8	363758.3	25.8	B31.8	
9110	276.9	0.0	1.000	1.000	93631.5	363758.3	25.7	B31.8	
9119	235.9	0.0	1.000	1.000	93590.6	363758.3	25.7	B31.8	
9119	235.9	0.0	1.000	1.000	93590.6	363758.3	25.7	B31.8	
9120	229.0	0.0	1.000	1.000	93583.6	363758.3	25.7	B31.8	
9120	302.5	0.0	2.063	1.720	93657.9	363758.3	25.7	B31.8	
9129	388.8	0.0	2.063	1.720	93780.5	363758.3	25.8	B31.8	
9129	388.8	0.0	2.063	1.720	93780.5	363758.3	25.8	B31.8	
9130	1595.2	0.0	2.063	1.720	94879.9	363758.3	26.1	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9130	1020.4	0.0	1.000	1.000	94305.1	363758.3	25.9	B31.8	
10070	1034.7	0.0	1.000	1.000	94319.4	363758.3	25.9	B31.8	
10070	1034.7	0.0	1.000	1.000	94319.4	363758.3	25.9	B31.8	
10080	3024.1	0.0	1.000	1.000	96308.8	363758.3	26.5	B31.8	
10080	3024.1	0.0	1.000	1.000	96308.8	363758.3	26.5	B31.8	
9140	5927.6	0.0	1.000	1.000	99212.3	363758.3	27.3	B31.8	
9140	5927.6	0.0	1.000	1.000	99212.3	363758.3	27.3	B31.8	
9150	8146.2	0.0	1.000	1.000	101430.9	363758.3	27.9	B31.8	
9150	8146.2	0.0	1.000	1.000	101430.9	363758.3	27.9	B31.8	
9160	1691.3	0.0	2.464	2.952	94976.0	363758.3	26.1	B31.8	
9160	10152.6	0.0	2.464	2.952	103419.8	363758.3	28.4	B31.8	
9180	2856.8	0.0	1.000	1.000	96124.0	363758.3	26.4	B31.8	
9180	4049.9	0.0	1.880	1.880	97317.1	363758.3	26.8	B31.8	
9190	4204.3	0.0	1.880	1.880	74215.9	363758.3	20.4	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9190	4117.0	0.0	2.205	1.838	74128.6	311257.1	23.8	B31.8	
9199	1313.8	0.0	2.205	1.838	71338.2	311257.1	22.9	B31.8	
9199	1313.8	0.0	2.205	1.838	71338.2	311257.1	22.9	B31.8	
9200	5954.9	0.0	2.205	1.838	75984.6	311257.1	24.4	B31.8	
9200	3974.9	0.0	1.000	1.000	74004.5	311257.1	23.8	B31.8	
9210	4023.2	0.0	1.000	1.000	74052.9	311257.1	23.8	B31.8	
9210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	6025.4	0.0	1.000	1.000	76055.1	311257.1	24.4	B31.8	
9230	12516.9	0.0	1.000	1.000	82546.6	311257.1	26.5	B31.8	
9230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	5183.7	0.0	1.000	1.000	75213.4	311257.1	24.2	B31.8	
9250	9780.9	0.0	1.000	1.000	79810.6	311257.1	25.6	B31.8	

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CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9250	9780.9	0.0	1.000	1.000	79810.6	311257.1	25.6	B31.8	
9280	5765.3	0.0	1.000	1.000	75795.0	311257.1	24.4	B31.8	
9280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	4528.9	0.0	1.000	1.000	74558.6	311257.1	24.0	B31.8	
9300	4495.6	0.0	1.000	1.000	74525.3	311257.1	23.9	B31.8	
9300	4495.6	0.0	1.000	1.000	74525.3	311257.1	23.9	B31.8	
9310	12833.0	0.0	2.428	2.428	82862.7	311257.1	26.6	B31.8	
9310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	6508.6	0.0	1.000	1.000	76538.3	311257.1	24.6	B31.8	
9330	2610.5	0.0	2.071	2.428	72640.2	311257.1	23.3	B31.8	
9330	17983.7	0.0	2.071	2.428	87994.6	311257.1	28.3	B31.8	
9340	4847.5	0.0	2.071	2.428	74858.4	311257.1	24.1	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9340	272.6	0.0	2.071	2.428	70284.2	311257.1	22.6	B31.8	
9345	0.0	0.0	1.000	1.000	70011.6	311257.1	22.5	B31.8	
9340	3514.3	0.0	2.071	2.428	73522.9	311257.1	23.6	B31.8	
9350	3647.1	0.0	1.000	1.000	73655.7	311257.1	23.7	B31.8	
9350	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	13076.8	0.0	1.000	1.000	83085.4	311257.1	26.7	B31.8	
9370	10901.7	0.0	1.000	1.000	80910.3	311257.1	26.0	B31.8	
9370	10901.7	0.0	1.000	1.000	80910.3	311257.1	26.0	B31.8	
9378	96.4	0.0	1.000	1.000	70105.0	311257.1	22.5	B31.8	
9378	2729.1	0.0	2.205	1.838	72737.7	311257.1	23.4	B31.8	
9379	2839.7	0.0	2.205	1.838	72848.8	311257.1	23.4	B31.8	
9379	2839.7	0.0	2.205	1.838	72848.8	311257.1	23.4	B31.8	
9380	2526.8	0.0	2.205	1.838	72537.7	311257.1	23.3	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9380	1696.0	0.0	1.000	1.000	71707.0	311257.1	23.0	B31.8	
9390	6326.1	0.0	2.071	2.428	76337.1	311257.1	24.5	B31.8	
9330	8247.0	0.0	2.071	2.428	78273.7	311257.1	25.1	B31.8	
9335	12642.9	0.0	1.000	1.000	82669.6	311257.1	26.6	B31.8	
9335	12642.9	0.0	1.000	1.000	82669.6	311257.1	26.6	B31.8	
9500	10149.5	0.0	1.000	1.000	80176.2	311257.1	25.8	B31.8	
9500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9510	7734.6	0.0	2.205	1.838	77761.3	311257.1	25.0	B31.8	
9519	7789.3	0.0	2.205	1.838	77812.0	311257.1	25.0	B31.8	
9519	7789.3	0.0	2.205	1.838	77812.0	311257.1	25.0	B31.8	
9520	7464.1	0.0	2.205	1.838	77476.3	311257.1	24.9	B31.8	
9520	4480.7	0.0	1.000	1.000	74492.9	311257.1	23.9	B31.8	
9530	4448.2	0.0	1.000	1.000	74460.4	311257.1	23.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9530	7543.9	0.0	1.880	1.880	77556.1	311257.1	24.9	B31.8	
9550	1869.8	0.0	1.880	1.880	95137.4	311257.1	30.6	B31.8	
9550	657.8	0.0	1.000	1.000	93925.3	363758.3	25.8	B31.8	
9560	1911.1	0.0	2.464	2.952	95178.6	363758.3	26.2	B31.8	
9560	1453.1	0.0	2.464	2.952	94737.8	363758.3	26.0	B31.8	
9900	9216.4	0.0	2.464	2.952	102501.1	363758.3	28.2	B31.8	
9900	452.9	0.0	2.464	2.952	43977.6	363758.3	12.1	B31.8	
10000	0.0	0.0	1.000	1.000	43524.7	363758.3	12.0	B31.8	
9900	9215.9	0.0	2.464	2.952	102500.6	363758.3	28.2	B31.8	
9910	2062.4	0.0	1.000	1.000	95347.1	363758.3	26.2	B31.8	
9910	2062.4	0.0	1.000	1.000	95347.1	363758.3	26.2	B31.8	
9920	565.9	0.0	1.000	1.000	93850.6	363758.3	25.8	B31.8	
9920	880.9	0.0	2.063	1.720	94165.6	363758.3	25.9	B31.8	
9951	124.0	0.0	2.063	1.720	93467.1	363758.3	25.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9951	124.0	0.0	2.063	1.720	93467.1	363758.3	25.7	B31.8	
9950	127.4	0.0	2.063	1.720	93414.0	363758.3	25.7	B31.8	
9950	95.7	0.0	1.000	1.000	93382.4	363758.3	25.7	B31.8	
9960	95.6	0.0	1.000	1.000	93381.4	363758.3	25.7	B31.8	
9960	95.6	0.0	1.000	1.000	93381.2	363758.3	25.7	B31.8	
9961	97.1	0.0	1.000	1.000	93382.7	363758.3	25.7	B31.8	
9961	144.1	0.0	2.063	1.720	93429.4	363758.3	25.7	B31.8	
9962	137.3	0.0	2.063	1.720	93423.7	363758.3	25.7	B31.8	
9962	137.3	0.0	2.063	1.720	93423.3	363758.3	25.7	B31.8	
10010	118.3	0.0	2.063	1.720	93393.7	363758.3	25.7	B31.8	
10010	91.2	0.0	1.000	1.000	93365.6	363758.3	25.7	B31.8	
10011	168.0	0.0	1.000	1.000	93442.4	363758.3	25.7	B31.8	
10011	168.0	0.0	1.000	1.000	93441.1	363758.3	25.7	B31.8	
10012	124.9	0.0	1.000	1.000	93398.1	363758.3	25.7	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10012	124.9	0.0	1.000	1.000	93397.0	363758.3	25.7	B31.8	
11100	62.2	0.0	1.000	1.000	93334.2	363758.3	25.7	B31.8	
11100	62.2	0.0	1.000	1.000	93331.6	363758.3	25.7	B31.8	
11110	0.1	0.0	1.000	1.000	93269.5	363758.3	25.6	B31.8	
11110	0.1	0.0	1.000	1.000	93267.5	363758.3	25.6	B31.8	
10020	0.1	0.0	1.000	1.000	93267.4	363758.3	25.6	B31.8	
10020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	0.0	0.0	1.000	1.000	93267.3	363758.3	25.6	B31.8	
10030	0.0	0.0	1.000	1.000	93267.3	363758.3	25.6	B31.8	
9560	1639.0	0.0	2.464	2.952	94906.0	363758.3	26.1	B31.8	
9580	221.5	0.0	1.000	1.000	93488.6	363758.3	25.7	B31.8	
9580	1019.6	0.0	1.880	1.880	94286.6	363758.3	25.9	B31.8	
9590	2518.8	0.0	1.880	1.880	72530.2	363758.3	19.9	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9590	2519.7	0.0	2.205	1.838	72531.0	311257.1	23.3	B31.8	
9599	3458.1	0.0	2.205	1.838	73479.9	311257.1	23.6	B31.8	
9599	3458.1	0.0	2.205	1.838	73479.9	311257.1	23.6	B31.8	
9600	3946.2	0.0	2.205	1.838	73972.5	311257.1	23.8	B31.8	
9600	2825.2	0.0	1.000	1.000	72851.4	311257.1	23.4	B31.8	
9610	2826.2	0.0	1.000	1.000	72852.5	311257.1	23.4	B31.8	
9610	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	10679.5	0.0	1.000	1.000	80705.8	311257.1	25.9	B31.8	
9622	14108.1	0.0	1.000	1.000	84134.4	311257.1	27.0	B31.8	
9622	14108.1	0.0	1.000	1.000	84134.4	311257.1	27.0	B31.8	
9624	12576.7	0.0	1.000	1.000	82602.9	311257.1	26.5	B31.8	
9624	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9627	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9627	9656.4	0.0	1.000	1.000	79682.7	311257.1	25.6	B31.8	
9630	1411.4	0.0	1.000	1.000	71437.6	311257.1	23.0	B31.8	
9630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	2186.9	0.0	1.000	1.000	72213.1	311257.1	23.2	B31.8	
9650	2396.9	0.0	1.000	1.000	72423.1	311257.1	23.3	B31.8	
9650	2396.9	0.0	1.000	1.000	72423.1	311257.1	23.3	B31.8	
9660	3308.3	0.0	1.000	1.000	73334.6	311257.1	23.6	B31.8	
9660	3308.3	0.0	1.000	1.000	73334.6	311257.1	23.6	B31.8	
9670	135.7	0.0	1.000	1.000	70161.9	311257.1	22.5	B31.8	
9670	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	914.6	0.0	1.000	1.000	70940.9	311257.1	22.8	B31.8	
9690	8551.4	0.0	1.000	1.000	78577.7	311257.1	25.2	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9690	8551.4	0.0	1.000	1.000	78577.7	311257.1	25.2	B31.8	
9390	727.5	0.0	2.071	2.428	70753.8	311257.1	22.7	B31.8	
9390	3127.0	0.0	2.071	2.428	73150.3	311257.1	23.5	B31.8	
9710	3494.0	0.0	1.000	1.000	73517.3	311257.1	23.6	B31.8	
9710	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9720	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9720	10035.1	0.0	1.000	1.000	80058.4	311257.1	25.7	B31.8	
9730	6089.8	0.0	1.000	1.000	76113.1	311257.1	24.5	B31.8	
9730	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	6305.8	0.0	2.205	1.838	76329.1	311257.1	24.5	B31.8	
9809	1993.3	0.0	2.205	1.838	72013.8	311257.1	23.1	B31.8	
9809	1993.3	0.0	2.205	1.838	72013.8	311257.1	23.1	B31.8	
9810	3345.0	0.0	2.205	1.838	73357.5	311257.1	23.6	B31.8	

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STRESSES REPORT: Stresses on Elements
CASE 3 (SUS) W+P1

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9810	2342.4	0.0	1.000	1.000	72354.8	311257.1	23.2	B31.8	
9820	2395.9	0.0	1.000	1.000	72408.4	311257.1	23.3	B31.8	
9820	3489.7	0.0	1.880	1.880	73502.1	311257.1	23.6	B31.8	
9840	3745.9	0.0	1.880	1.880	97013.6	311257.1	31.2	B31.8	
9840	2645.6	0.0	1.000	1.000	95913.3	363758.3	26.4	B31.8	
9160	9636.6	0.0	2.464	2.952	102904.3	363758.3	28.3	B31.8	
2310	23.6	0.0	1.518	1.691	41436.7	363750.0	11.4	B31.8	
6000	0.0	0.0	1.000	1.000	41413.1	363750.0	11.4	B31.8	

Piping Code: Multiple Codes

B31.8 = B31.8 -2003, February 6, 2004

B31.3 = B31.3 -2006, May 31, 2007

CODE STRESS CHECK PASSED : LOADCASE 4 (EXP) L4=L2-L3

Highest Stresses: (KPa)

CodeStress Ratio (%): 91.7 @Node 83

Code Stress: 391324.1 Allowable: 426711.8

Axial Stress: 2627.6 @Node 11020

Bending Stress: 390020.7 @Node 83

Torsion Stress: 41692.2 @Node 5559

Hoop Stress: 0.0 @Node 10200

3D Max Intensity: 391335.1 @Node 83

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10210	0.0	0.0	1.000	1.000	0.0	394048.1	0.0	B31.8	
10200	0.0	0.0	1.000	1.000	0.0	394034.6	0.0	B31.8	
10200	0.0	0.0	1.000	1.000	0.0	394034.6	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10190	25.1	0.0	1.000	1.000	25.1	392609.8	0.0	B31.8	
10190	25.1	0.0	1.000	1.000	25.1	392609.8	0.0	B31.8	
10180	100.3	0.0	1.000	1.000	100.3	391918.9	0.0	B31.8	
10180	100.3	0.0	1.000	1.000	100.3	391918.9	0.0	B31.8	
10170	32.0	0.0	1.000	1.000	32.0	393949.0	0.0	B31.8	
10170	32.0	0.0	1.000	1.000	32.0	393949.0	0.0	B31.8	
10160	429.1	0.0	1.000	1.000	429.1	392116.5	0.1	B31.8	
10160	429.1	0.0	1.000	1.000	429.1	392116.5	0.1	B31.8	
10150	111.9	0.0	1.000	1.000	111.9	393681.3	0.0	B31.8	
10150	111.9	0.0	1.000	1.000	111.9	393681.3	0.0	B31.8	
10140	1734.9	0.0	1.000	1.000	1734.9	393387.3	0.4	B31.8	
1014	1734.9	0.0	1.00	1.00	1734.9	393387.	0.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
0			0	0		3			
10135	6991.0	0.0	1.000	1.000	6991.0	387754.3	1.8	B31.8	
10135	6991.0	0.0	1.000	1.000	6991.0	387754.3	1.8	B31.8	
10130	2390.0	0.0	2.180	2.573	2390.0	393228.2	0.6	B31.8	
10130	0.0	0.0	2.180	2.573	0.0	393938.0	0.0	B31.8	
10300	0.0	0.0	1.000	1.000	0.0	394048.1	0.0	B31.8	
10130	2390.0	0.0	2.180	2.573	2390.0	392820.2	0.6	B31.8	
10260	1096.4	0.0	1.000	1.000	1096.4	393454.5	0.3	B31.8	
10260	1096.4	0.0	1.000	1.000	1096.4	393454.5	0.3	B31.8	
10250	1096.4	0.0	1.000	1.000	1096.4	393556.5	0.3	B31.8	
10250	1096.4	0.0	1.000	1.000	1096.4	393556.5	0.3	B31.8	
10120	1096.4	0.0	1.000	1.000	1096.4	393564.3	0.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
10120	1096.4	0.0	1.000	1.000	1096.4	393563.0	0.3	B31.8	
10121	2938.3	0.0	1.000	1.000	2938.3	393714.4	0.7	B31.8	
10121	6346.4	0.0	2.190	1.825	6346.4	393540.3	1.6	B31.8	
10122	10792.1	584.1	2.190	1.825	10807.9	393706.3	2.7	B31.8	
10122	10792.1	584.1	2.190	1.825	10807.9	393705.8	2.7	B31.8	
10110	10630.6	757.7	2.190	1.825	10657.6	393737.0	2.7	B31.8	
10110	4854.4	757.7	1.000	1.000	4913.2	393948.5	1.2	B31.8	
10111	410.8	757.7	1.000	1.000	861.9	393502.6	0.2	B31.8	
10111	410.8	757.7	1.000	1.000	861.9	393504.3	0.2	B31.8	
10112	1166.1	757.7	1.000	1.000	1390.7	393710.1	0.4	B31.8	
10112	1166.1	757.7	1.000	1.000	1390.7	393711.5	0.4	B31.8	
11200	922.5	757.7	1.000	1.000	1193.7	393991.5	0.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11200	922.5	757.7	1.000	1.000	1193.7	393994.9	0.3	B31.8	
11210	1177.8	757.7	1.000	1.000	1400.5	393791.2	0.4	B31.8	
11210	1177.8	757.7	1.000	1.000	1400.5	393794.8	0.4	B31.8	
11211	1921.3	757.7	1.000	1.000	2065.3	392913.8	0.5	B31.8	
11211	1921.3	757.7	1.000	1.000	2065.3	392915.6	0.5	B31.8	
11212	348.3	757.7	1.000	1.000	833.9	392294.5	0.2	B31.8	
11212	348.3	757.7	1.000	1.000	833.9	392296.4	0.2	B31.8	
11213	8902.2	757.7	1.000	1.000	8934.4	393919.8	2.3	B31.8	
11213	19490.6	757.7	2.190	1.825	19505.4	393725.7	5.0	B31.8	
11214	20690.8	234.1	2.190	1.825	20692.1	392638.2	5.3	B31.8	
11214	20690.8	234.1	2.190	1.825	20692.1	392640.7	5.3	B31.8	
1010	12471.	465.4	2.19	1.82	12480.	392156.	3.2	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
0	6		0	5	3	2			
10100	5712.5	465.4	1.000	1.000	5731.5	392993.3	1.5	B31.8	
9	1966.3	465.4	1.000	1.000	2020.6	393109.5	0.5	B31.8	
9	1966.3	465.4	1.000	1.000	2020.6	393109.5	0.5	B31.8	
10	4933.3	465.4	1.000	1.000	4955.2	393308.6	1.3	B31.8	
10	4933.3	465.4	1.000	1.000	4955.2	393311.8	1.3	B31.8	
18	5017.1	465.4	1.000	1.000	5038.7	393313.2	1.3	B31.8	
18	10961.7	465.4	2.190	1.825	10971.5	392694.0	2.8	B31.8	
19	19812.5	9.9	2.190	1.825	19812.5	392243.3	5.1	B31.8	
19	19812.5	9.9	2.190	1.825	19812.5	392243.3	5.1	B31.8	
20	18069.9	204.9	2.190	1.825	18071.0	391122.7	4.6	B31.8	
20	8250.9	204.9	1.000	1.000	8253.4	392289.4	2.1	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
30	15930.7	204.9	2.180	2.573	15932.1	390034.6	4.1	B31.8	
30	20089.0	12976.0	2.180	2.573	23915.4	356763.9	6.7	B31.8	
119	14326.5	10648.6	2.192	1.826	17850.6	365138.1	4.9	B31.8	
119	14326.5	10648.6	2.192	1.826	17850.6	365138.1	4.9	B31.8	
120	22386.1	2592.2	2.192	1.826	22535.7	364006.3	6.2	B31.8	
120	12211.6	2592.2	1.000	1.000	12483.7	365281.8	3.4	B31.8	
125	12185.6	2592.2	1.000	1.000	12458.2	365291.6	3.4	B31.8	
125	12185.6	2592.2	1.000	1.000	12458.2	365289.0	3.4	B31.8	
149	12334.5	2592.2	1.000	1.000	12604.0	365576.0	3.4	B31.8	
149	12334.5	2592.2	1.000	1.000	12604.0	365576.0	3.4	B31.8	
150	28046.9	2592.2	1.929	2.239	28166.4	364925.7	7.7	B31.8	
	4473.6	7878.	1.92	2.23	9059.6	358403.	2.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
150		0	9	9		2			
220	692.3	7878.0	1.000	1.000	7908.4	365422.0	2.2	B31.8	
220	692.3	7878.0	1.000	1.000	7908.4	365422.1	2.2	B31.8	
229	720.8	7878.0	1.000	1.000	7910.9	366693.1	2.2	B31.8	
229	720.8	7878.0	1.000	1.000	7910.9	366693.1	2.2	B31.8	
230	10971.8	7878.0	4.759	6.011	13507.1	362415.2	3.7	B31.8	
230	189547.7	286.7	4.759	6.011	189547.9	430930.1	44.0	B31.8	
231	15450.2	286.7	1.000	1.000	15452.8	435182.6	3.6	B31.8	
231	15450.2	286.7	1.000	1.000	15452.8	435182.6	3.6	B31.8	
232	727.6	286.7	1.000	1.000	782.1	435283.8	0.2	B31.8	
232	727.6	286.7	1.000	1.000	782.1	435284.9	0.2	B31.8	
1598	27211.2	286.7	1.000	1.000	27212.8	434731.5	6.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1598	50055.8	286.7	1.840	1.533	50056.6	434365.6	11.5	B31.8	
1599	63159.3	328.3	1.840	1.533	63160.2	434141.5	14.5	B31.8	
1599	63159.3	328.3	1.840	1.533	63160.2	434141.5	14.5	B31.8	
1600	62734.3	191.4	1.840	1.533	62734.6	434261.1	14.4	B31.8	
1600	34103.6	191.4	1.000	1.000	34104.2	434650.3	7.8	B31.8	
8300	21623.6	191.4	1.000	1.000	21624.5	435633.8	5.0	B31.8	
8300	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8310	4763.5	191.4	1.000	1.000	4767.3	429709.0	1.1	B31.8	
8320	1462.9	191.4	1.000	1.000	1475.3	425903.8	0.3	B31.8	
8320	1462.9	191.4	1.000	1.000	1475.3	425903.8	0.3	B31.8	
1610	1149.2	191.4	1.000	1.000	1165.0	431561.7	0.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1610	1149.2	191.4	1.000	1.000	1165.0	431561.7	0.3	B31.8	
1650	875.9	191.4	1.000	1.000	896.5	426567.2	0.2	B31.8	
230	11843.0	3648.6	4.759	6.011	12392.3	362893.5	3.4	B31.8	
240	1360.1	3648.6	1.000	1.000	3893.9	365828.8	1.1	B31.8	
240	1360.1	3648.6	1.000	1.000	3893.9	365829.0	1.1	B31.8	
249	239.9	3648.6	1.000	1.000	3656.5	366319.5	1.0	B31.8	
249	239.9	3648.6	1.000	1.000	3656.5	366319.5	1.0	B31.8	
250	4734.4	3648.6	4.759	6.011	5977.2	366619.2	1.6	B31.8	
250	89050.7	225.2	4.759	6.011	89051.0	434476.7	20.5	B31.8	
252	5175.3	225.2	1.000	1.000	5180.2	435627.1	1.2	B31.8	
252	5175.3	225.2	1.000	1.000	5180.2	435627.1	1.2	B31.8	
	4800.2	225.2	1.00	1.00	4805.5	435748.	1.1	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
253			0	0		8			
253	4800.2	225.2	1.000	1.000	4805.5	435748.8	1.1	B31.8	
1698	26860.4	225.2	1.000	1.000	26861.4	435732.0	6.2	B31.8	
1698	49410.3	225.2	1.840	1.533	49410.8	435723.0	11.3	B31.8	
1699	60039.2	318.0	1.840	1.533	60040.0	435565.1	13.8	B31.8	
1699	60039.2	318.0	1.840	1.533	60040.0	435565.1	13.8	B31.8	
1700	59002.4	236.2	1.840	1.533	59002.8	435406.2	13.6	B31.8	
1700	32074.8	236.2	1.000	1.000	32075.7	435486.9	7.4	B31.8	
8200	20475.8	236.2	1.000	1.000	20477.2	435682.8	4.7	B31.8	
8200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8210	4805.6	236.2	1.000	1.000	4811.4	430764.5	1.1	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8220	979.6	236.2	1.000	1.000	1007.6	427346.5	0.2	B31.8	
8220	979.6	236.2	1.000	1.000	1007.6	427346.5	0.2	B31.8	
1710	1024.6	236.2	1.000	1.000	1051.5	431065.0	0.2	B31.8	
1710	1024.6	236.2	1.000	1.000	1051.5	431065.0	0.2	B31.8	
1750	1163.9	236.2	1.000	1.000	1187.7	425898.8	0.3	B31.8	
250	2932.7	1691.5	4.759	6.011	3385.6	366633.7	0.9	B31.8	
260	1676.2	1691.5	1.000	1.000	2381.4	366764.0	0.6	B31.8	
260	1676.2	1691.5	1.000	1.000	2381.4	366764.2	0.6	B31.8	
269	353.5	1691.5	1.000	1.000	1728.1	366713.9	0.5	B31.8	
269	353.5	1691.5	1.000	1.000	1728.1	366713.9	0.5	B31.8	
270	5570.3	1691.5	4.759	6.011	5821.5	366218.0	1.6	B31.8	
	75333.	1088.	4.75	6.01	75341.	434686.	17.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
270	7	2	9	1	6	7			
272	5534.4	1088.2	1.000	1.000	5640.3	435657.2	1.3	B31.8	
272	5534.4	1088.2	1.000	1.000	5640.3	435657.2	1.3	B31.8	
273	7963.3	1088.2	1.000	1.000	8037.3	435519.8	1.8	B31.8	
273	7963.3	1088.2	1.000	1.000	8037.3	435519.8	1.8	B31.8	
1798	29190.9	1088.2	1.000	1.000	29211.2	435309.8	6.7	B31.8	
1798	53692.3	1088.2	1.840	1.533	53703.4	435186.7	12.3	B31.8	
1799	63063.8	1319.7	1.840	1.533	63077.6	435322.5	14.5	B31.8	
1799	63063.8	1319.7	1.840	1.533	63077.6	435322.5	14.5	B31.8	
1800	60031.4	824.3	1.840	1.533	60037.0	435431.5	13.8	B31.8	
1800	32638.7	824.3	1.000	1.000	32649.2	435503.7	7.5	B31.8	
8100	17851.0	824.3	1.000	1.000	17870.1	433572.5	4.1	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8100	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8110	1119.9	414.0	1.000	1.000	1194.0	432130.6	0.3	B31.8	
8120	4790.2	414.0	1.000	1.000	4808.1	429958.4	1.1	B31.8	
8120	4790.2	414.0	1.000	1.000	4808.1	429958.4	1.1	B31.8	
1810	2158.7	414.0	1.000	1.000	2198.1	434293.4	0.5	B31.8	
1810	4297.9	824.3	1.000	1.000	4376.2	430659.5	1.0	B31.8	
1850	3495.7	824.3	1.000	1.000	3591.6	426095.3	0.8	B31.8	
270	1955.2	545.3	4.759	6.011	2029.8	366229.2	0.6	B31.8	
289	1090.4	545.3	1.000	1.000	1219.1	366753.3	0.3	B31.8	
289	1090.4	545.3	1.000	1.000	1219.1	366753.3	0.3	B31.8	
290	12358.8	545.3	4.759	6.011	12370.8	366784.3	3.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
290	93517.5	1776.5	4.759	6.011	93534.4	307408.7	30.4	B31.8	
292	9378.3	1776.5	1.000	1.000	9545.1	307867.1	3.1	B31.8	
292	9378.3	1776.5	1.000	1.000	9545.1	307867.1	3.1	B31.8	
293	7637.2	1776.5	1.000	1.000	7841.1	307763.9	2.5	B31.8	
293	7637.2	1776.5	1.000	1.000	7841.1	307764.3	2.5	B31.8	
2098	27107.6	1776.5	1.000	1.000	27165.7	307600.0	8.8	B31.8	
2098	49852.1	1776.5	1.840	1.533	49883.7	307496.3	16.2	B31.8	
2099	58869.9	2132.2	1.840	1.533	58908.5	307358.3	19.2	B31.8	
2099	58869.9	2132.2	1.840	1.533	58908.5	307358.3	19.2	B31.8	
2100	57195.0	1393.1	1.840	1.533	57212.0	307283.2	18.6	B31.8	
2100	31103.3	1393.1	1.000	1.000	31134.5	435301.0	7.2	B31.8	
	19431.	1393.	1.00	1.00	19481.	435671.	4.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
8000	6	1	0	0	5	3			
8000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8010	3663.5	1393.1	1.000	1.000	3919.4	430494.1	0.9	B31.8	
8020	2157.7	1393.1	1.000	1.000	2568.4	426980.5	0.6	B31.8	
8020	2157.7	1393.1	1.000	1.000	2568.4	426980.5	0.6	B31.8	
2110	1546.2	1393.1	1.000	1.000	2081.2	431199.0	0.5	B31.8	
2110	1546.2	1393.1	1.000	1.000	2081.2	431199.0	0.5	B31.8	
2150	1772.7	1393.1	1.000	1.000	2254.6	426077.2	0.5	B31.8	
290	105.5	0.0	4.759	6.011	105.5	280195.9	0.0	B31.8	
299	10.6	0.0	1.000	1.000	10.6	280203.5	0.0	B31.8	
299	10.6	0.0	1.000	1.000	10.6	280203.5	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
300	0.0	0.0	1.000	1.000	0.0	280204.7	0.0	B31.8	
150	8457.1	4649.3	1.929	2.239	9650.8	360887.7	2.7	B31.8	
160	2851.2	4649.3	1.000	1.000	5453.9	366338.7	1.5	B31.8	
160	2851.2	4649.3	1.000	1.000	5453.9	366338.5	1.5	B31.8	
179	1168.0	4649.3	1.000	1.000	4793.7	366531.7	1.3	B31.8	
179	1168.0	4649.3	1.000	1.000	4793.7	366531.7	1.3	B31.8	
180	12778.4	4649.3	4.759	6.011	13597.9	366416.3	3.7	B31.8	
180	227019.5	2532.2	4.759	6.011	227033.6	430883.6	52.7	B31.8	
182	20314.6	2532.2	1.000	1.000	20471.8	435137.6	4.7	B31.8	
182	20314.6	2532.2	1.000	1.000	20471.8	435137.6	4.7	B31.8	
183	1512.3	2532.2	1.000	1.000	2949.4	435661.1	0.7	B31.8	
	1512.3	2532.	1.00	1.00	2949.4	435661.	0.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
183		2	0	0		4			
1499	60631.5	2648.6	1.840	1.533	60689.4	435068.8	13.9	B31.8	
1499	60631.5	2648.6	1.840	1.533	60689.4	435068.8	13.9	B31.8	
1500	60759.6	1383.8	1.840	1.533	60775.3	434978.5	14.0	B31.8	
1500	33053.1	1383.8	1.000	1.000	33082.0	435176.6	7.6	B31.8	
8400	21152.3	1383.8	1.000	1.000	21197.5	435625.3	4.9	B31.8	
8400	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
8410	5083.3	1383.8	1.000	1.000	5268.3	430466.9	1.2	B31.8	
8420	946.3	1383.8	1.000	1.000	1676.4	426928.6	0.4	B31.8	
8420	946.3	1383.8	1.000	1.000	1676.4	426928.6	0.4	B31.8	
1510	1140.6	1383.8	1.000	1.000	1793.3	431196.6	0.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1510	1140.6	1383.8	1.000	1.000	1793.3	431196.6	0.4	B31.8	
1550	2369.6	1383.8	1.000	1.000	2744.1	426078.3	0.6	B31.8	
180	189.0	0.0	4.759	6.011	189.0	366825.3	0.1	B31.8	
189	17.2	0.0	1.000	1.000	17.2	366830.8	0.0	B31.8	
189	17.2	0.0	1.000	1.000	17.2	366830.8	0.0	B31.8	
190	0.0	0.0	1.000	1.000	0.0	366831.7	0.0	B31.8	
30	27880.8	2986.4	2.180	2.573	28040.3	388662.7	7.2	B31.8	
35	7997.6	2986.4	1.000	1.000	8537.0	390448.3	2.2	B31.8	
35	7997.6	2986.4	1.000	1.000	8537.0	390448.3	2.2	B31.8	
40	1876.0	2986.4	1.000	1.000	3526.8	388819.6	0.9	B31.8	
40	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
50	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
60	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
70	12104.1	3608.6	1.000	1.000	12630.6	368978.1	3.4	B31.8	
75	14094.1	3608.6	1.000	1.000	14548.7	364270.7	4.0	B31.8	
75	14094.1	3608.6	1.000	1.000	14548.7	364270.7	4.0	B31.8	
80	42659.9	3608.6	3.577	3.577	42812.2	347322.6	12.3	B31.8	
80	120955.5	12992.3	3.577	3.577	121651.3	377973.6	32.2	B31.8	
5495	39609.9	12992.3	1.000	1.000	41686.3	423109.9	9.9	B31.8	
5495	39609.9	12992.3	1.000	1.000	41686.3	423109.9	9.9	B31.8	
	56468.	32721	2.00	1.67	65263.	428916.	15.2	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5501	3	.6	4	0	9	6			
5501	56468.3	32721.6	2.004	1.670	65263.9	428916.6	15.2	B31.8	
5500	48541.2	34465.3	2.004	1.670	59532.4	424358.8	14.0	B31.8	
5500	24971.1	34465.3	1.000	1.000	42560.7	425694.7	10.0	B31.8	
5510	24921.7	34465.3	1.000	1.000	42531.7	425645.0	10.0	B31.8	
5510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5520	11865.4	34465.3	1.000	1.000	36450.6	420179.7	8.7	B31.8	
5530	18775.0	34465.3	1.000	1.000	39247.4	428093.9	9.2	B31.8	
5530	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5540	21043.6	34465.3	1.000	1.000	40381.8	428904.5	9.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5550	22793.9	34465.3	1.000	1.000	41320.9	429257.9	9.6	B31.8	
5550	22793.9	34465.3	1.000	1.000	41320.9	429257.9	9.6	B31.8	
5559	22126.1	41692.2	2.004	1.670	47199.6	425412.6	11.1	B31.8	
5559	22126.1	41692.2	2.004	1.670	47199.6	425412.6	11.1	B31.8	
5560	53651.1	27140.0	2.004	1.670	60125.0	424344.8	14.2	B31.8	
5560	31479.0	27140.0	1.000	1.000	41563.3	427330.2	9.7	B31.8	
5570	31431.4	27140.0	1.000	1.000	41527.2	427331.8	9.7	B31.8	
5570	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
5580	28037.1	27140.0	1.683	1.683	39021.2	426582.3	9.1	B31.8	
5590	11180.6	13349.8	1.683	1.683	17413.3	401175.1	4.3	B31.8	
	6643.8	-6674.	1.00	1.00	14911.	343138.	4.3	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5590		9	0	0	6	6			
5595	19559.6	6674.9	1.000	1.000	23681.1	344360.0	6.9	B31.3	
5595	19559.6	-6674.9	1.000	1.000	23681.1	344360.0	6.9	B31.3	
5599	39769.9	14430.2	3.131	2.609	49138.2	343946.4	14.3	B31.3	
5599	39769.9	-14430.2	3.131	2.609	49138.2	343946.4	14.3	B31.3	
5600	31835.4	14707.7	3.131	2.609	43344.6	343060.7	12.6	B31.3	
5600	11579.7	-14707.7	1.000	1.000	31612.5	344132.4	9.2	B31.3	
5605	8985.1	14707.7	1.000	1.000	30757.0	343887.2	8.9	B31.3	
5605	8985.1	-14707.7	1.000	1.000	30757.0	343887.2	8.9	B31.3	
5609	16436.8	16893.1	3.131	2.609	37572.2	344168.3	10.9	B31.3	
5609	16436.8	-16893.1	3.131	2.609	37572.2	344168.3	10.9	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
5610	65686.4	10468.6	3.131	2.609	68942.5	343599.9	20.1	B31.3	
5610	25131.7	-10468.6	1.000	1.000	32710.4	344298.3	9.5	B31.3	
5620	119135.6	10793.6	6.043	7.724	120961.3	335419.7	36.1	B31.3	
5620	14568.4	0.0	6.043	7.724	14568.4	344263.6	4.2	B31.3	
2560	13028.9	-0.0	6.043	7.724	13028.9	344263.5	3.8	B31.3	
350	3150.9	1996.6	1.482	1.642	3730.2	422566.4	0.9	B31.8	
400	832.4	1996.6	1.000	1.000	2163.1	427024.2	0.5	B31.8	
400	832.4	1996.6	1.000	1.000	2163.1	427024.2	0.5	B31.8	
410	1201.6	1996.6	1.000	1.000	2330.3	429482.7	0.5	B31.8	
420	11319.2	4230.3	1.482	1.642	12083.8	300340.5	4.0	B31.8	
1294	2049.3	4230.3	1.000	1.000	4700.5	300842.6	1.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1294	2049.3	4230.3	1.000	1.000	4700.5	300842.6	1.6	B31.8	
1295	3452.4	4230.3	1.000	1.000	5460.3	300935.9	1.8	B31.8	
1295	3452.4	4230.3	1.000	1.000	5460.3	428807.1	1.3	B31.8	
1298	13638.8	4230.3	1.000	1.000	14279.8	428398.4	3.3	B31.8	
1298	26386.1	4230.3	2.004	1.670	26723.1	427635.2	6.2	B31.8	
1299	29356.8	8048.1	2.004	1.670	30440.0	425502.3	7.2	B31.8	
1299	29356.8	8048.1	2.004	1.670	30440.0	425502.3	7.2	B31.8	
1300	29134.0	8169.8	2.004	1.670	30257.8	419368.3	7.2	B31.8	
1300	14603.6	8169.8	1.000	1.000	16733.6	295165.7	5.7	B31.8	
1330	14582.4	8169.8	1.000	1.000	16715.1	295111.8	5.7	B31.8	
1330	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1340	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1340	6157.8	4801.0	1.257	1.047	7808.3	380160.8	2.1	B31.8	
1349	7166.5	2311.4	1.257	1.047	7530.0	378587.4	2.0	B31.8	
1349	7166.5	2311.4	1.257	1.047	7530.0	378587.4	2.0	B31.8	
1350	5556.2	894.9	1.257	1.047	5627.8	376120.4	1.5	B31.8	
1350	4873.7	894.9	1.000	1.000	4955.2	378204.7	1.3	B31.8	
1355	2227.5	894.9	1.000	1.000	2400.5	371570.5	0.6	B31.8	
1355	2227.5	894.9	1.000	1.000	2400.5	371570.5	0.6	B31.8	
1360	13350.5	894.9	1.033	1.044	13380.4	377109.9	3.5	B31.8	
410	1201.6	1996.6	1.000	1.000	2330.3	429483.1	0.5	B31.8	
420	1243.3	1996.6	1.482	1.642	2352.1	429969.6	0.5	B31.8	
420	3062.7	795.6	1.482	1.642	3164.3	429232.6	0.7	B31.8	
	495.0	795.6	1.00	1.00	937.0	429829.	0.2	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
429			0	0		1			
429	495.0	795.6	1.000	1.000	937.0	429829.1	0.2	B31.8	
430	1125.1	795.6	1.000	1.000	1378.0	427801.2	0.3	B31.8	
440	11241.3	2676.1	1.482	1.642	11555.4	430107.8	2.7	B31.8	
1989	2532.8	2676.1	1.000	1.000	3684.7	430029.9	0.9	B31.8	
1989	2532.8	2676.1	1.000	1.000	3684.7	430029.9	0.9	B31.8	
1990	2180.4	2676.1	1.000	1.000	3451.9	429745.9	0.8	B31.8	
1990	2180.4	2676.1	1.000	1.000	3451.9	429748.4	0.8	B31.8	
1998	15240.8	2676.1	1.000	1.000	15474.0	429416.4	3.6	B31.8	
1998	29778.1	2676.1	2.004	1.670	29898.2	429005.3	7.0	B31.8	
1999	34781.3	7020.4	2.004	1.670	35482.8	427152.1	8.3	B31.8	
1999	34781.3	7020.4	2.004	1.670	35482.8	427152.1	8.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2000	33966.6	8846.3	2.004	1.670	35099.6	420581.9	8.3	B31.8	
2000	16950.1	8846.3	1.000	1.000	19119.7	423777.3	4.5	B31.8	
2030	16928.5	8846.3	1.000	1.000	19100.5	423720.0	4.5	B31.8	
2030	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2040	12244.6	5198.6	1.257	1.047	13302.4	379833.8	3.5	B31.8	
2049	13149.0	2367.7	1.257	1.047	13360.5	379871.2	3.5	B31.8	
2049	13149.0	2367.7	1.257	1.047	13360.5	379871.2	3.5	B31.8	
2050	10982.6	1103.5	1.257	1.047	11037.9	377099.8	2.9	B31.8	
2050	9002.9	1103.5	1.000	1.000	9070.2	378130.8	2.4	B31.8	
2060	4478.5	1103.5	1.000	1.000	4612.5	371965.2	1.2	B31.8	
	4478.5	1103.	1.00	1.00	4612.5	371965.	1.2	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2060		5	0	0		2			
1950	9943.5	1103.5	1.033	1.044	10004.6	378459.3	2.6	B31.8	
430	1125.1	795.6	1.000	1.000	1378.0	427802.4	0.3	B31.8	
440	562.8	795.6	1.482	1.642	974.5	428265.0	0.2	B31.8	
440	2321.6	1152.0	1.482	1.642	2591.7	428065.4	0.6	B31.8	
449	348.4	1152.0	1.000	1.000	1203.6	430573.1	0.3	B31.8	
449	348.4	1152.0	1.000	1.000	1203.6	430573.1	0.3	B31.8	
450	810.0	1152.0	1.000	1.000	1408.3	428388.8	0.3	B31.8	
18000	2760.6	1259.6	1.482	1.642	3034.4	429820.8	0.7	B31.8	
1044	1396.5	1259.6	1.000	1.000	1880.6	429911.1	0.4	B31.8	
1044	1396.5	1259.6	1.000	1.000	1880.6	429911.1	0.4	B31.8	
1045	4232.7	1259.6	1.000	1.000	4416.2	429722.6	1.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1045	4232.7	1259.6	1.000	1.000	4416.2	429725.0	1.0	B31.8	
1048	11973.6	1259.6	1.000	1.000	12039.7	429468.9	2.8	B31.8	
1048	23364.4	1259.6	2.004	1.670	23398.3	429069.3	5.5	B31.8	
1049	27339.2	5419.9	2.004	1.670	27871.2	427158.2	6.5	B31.8	
1049	27339.2	5419.9	2.004	1.670	27871.2	427158.2	6.5	B31.8	
1050	26063.5	8491.4	2.004	1.670	27411.9	420520.3	6.5	B31.8	
1050	13068.4	8491.4	1.000	1.000	15584.8	423724.5	3.7	B31.8	
1080	13058.8	8491.4	1.000	1.000	15576.8	423667.1	3.7	B31.8	
1080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1090	17463.0	4990.0	1.257	1.047	18162.0	379798.9	4.8	B31.8	
1099	18957.1	2447.2	1.257	1.047	19114.4	379969.8	5.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1099	18957.1	2447.2	1.257	1.047	19114.4	379969.8	5.0	B31.8	
1100	17852.9	974.1	1.257	1.047	17879.4	377140.9	4.7	B31.8	
1100	14378.4	974.1	1.000	1.000	14411.3	378105.8	3.8	B31.8	
1105	11247.7	974.1	1.000	1.000	11289.8	371946.3	3.0	B31.8	
1105	11247.7	974.1	1.000	1.000	11289.8	371946.3	3.0	B31.8	
1110	7590.1	974.1	1.033	1.044	7652.4	378469.8	2.0	B31.8	
450	810.0	1152.0	1.000	1.000	1408.3	428390.1	0.3	B31.8	
18000	927.9	1152.0	1.482	1.642	1479.3	428413.0	0.3	B31.8	
18000	909.9	1630.2	1.482	1.642	1866.9	428157.9	0.4	B31.8	
460	787.2	1630.2	1.000	1.000	1810.3	426159.9	0.4	B31.8	
460	787.2	1630.2	1.000	1.000	1810.3	426161.2	0.4	B31.8	
1600	263.2	1630.	1.48	1.64	1651.3	428258.	0.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
0		2	2	2		0			
16000	14.4	0.0	1.482	1.642	14.4	430468.8	0.0	B31.8	
469	4.8	0.0	1.000	1.000	4.8	430508.8	0.0	B31.8	
469	4.8	0.0	1.000	1.000	4.8	430508.8	0.0	B31.8	
470	0.0	0.0	1.000	1.000	0.0	430541.4	0.0	B31.8	
16000	8771.1	510.6	1.482	1.642	8786.0	423355.0	2.1	B31.8	
489	5516.3	510.6	1.000	1.000	5539.9	427507.5	1.3	B31.8	
489	5516.3	510.6	1.000	1.000	5539.9	427507.5	1.3	B31.8	
490	7465.2	510.6	1.000	1.000	7482.7	429412.0	1.7	B31.8	
490	7465.2	510.6	1.000	1.000	7482.7	429417.4	1.7	B31.8	
509	18553.1	6053.6	2.004	1.670	19515.7	424144.7	4.6	B31.8	
509	18553.1	6053.6	2.004	1.670	19515.7	424144.7	4.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
510	15623.3	11243.2	2.004	1.670	19248.3	418791.7	4.6	B31.8	
510	8260.7	11243.2	1.000	1.000	13951.6	422970.6	3.3	B31.8	
540	8287.9	11243.2	1.000	1.000	13967.8	422921.4	3.3	B31.8	
540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
550	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
550	27638.6	6607.1	1.257	1.047	28417.3	377125.7	7.5	B31.8	
559	30715.8	3747.8	1.257	1.047	30943.6	375671.3	8.2	B31.8	
559	30715.8	3747.8	1.257	1.047	30943.6	375671.3	8.2	B31.8	
560	31422.3	1069.0	1.257	1.047	31440.5	374195.8	8.4	B31.8	
560	25233.4	1069.0	1.000	1.000	25256.0	376524.8	6.7	B31.8	
565	24164.9	1069.0	1.000	1.000	24188.5	371323.7	6.5	B31.8	
	24164.	1069.	1.00	1.00	24188.	371323.	6.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
565	9	0	0	0	5	7			
570	25528.4	1069.0	1.033	1.044	25550.7	371086.4	6.9	B31.8	
570	48667.9	9165.9	1.033	1.044	49523.5	371682.2	13.3	B31.8	
620	46443.6	9165.9	1.000	1.000	47339.5	376663.2	12.6	B31.8	
620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
630	45453.9	9165.9	1.000	1.000	46368.8	380723.7	12.2	B31.8	
635	46221.9	9165.9	1.000	1.000	47121.9	376851.5	12.5	B31.8	
635	46221.9	9165.9	1.000	1.000	47121.9	376851.5	12.5	B31.8	
14028	45976.9	9165.9	1.000	1.000	46881.7	379524.0	12.4	B31.8	
14028	54033.8	9165.9	1.257	1.047	54805.7	372770.9	14.7	B31.8	
14029	43572.5	27746.0	1.257	1.047	51656.6	373543.6	13.8	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14029	43572.5	27746.0	1.257	1.047	51656.6	373543.6	13.8	B31.8	
14030	34638.8	30890.4	1.257	1.047	46411.9	375154.7	12.4	B31.8	
14030	27891.2	30890.4	1.000	1.000	41619.0	375391.1	11.1	B31.8	
14025	8920.2	30890.4	1.000	1.000	32152.6	379670.8	8.5	B31.8	
14025	8920.2	30890.4	1.000	1.000	32152.6	379670.8	8.5	B31.8	
14019	9635.3	31623.6	1.257	1.047	33058.9	374630.0	8.8	B31.8	
14019	9635.3	31623.6	1.257	1.047	33058.9	374630.0	8.8	B31.8	
14020	25091.3	17996.3	1.257	1.047	30877.9	374716.8	8.2	B31.8	
14020	23902.3	17996.3	1.000	1.000	29919.7	374828.3	8.0	B31.8	
14013	8724.2	17996.3	1.000	1.000	19999.5	377823.8	5.3	B31.8	
14013	9547.5	17996.3	1.257	1.047	20372.1	377625.4	5.4	B31.8	
14014	13532.8	18617.0	1.257	1.047	23015.9	378202.1	6.1	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
14014	13532.8	18617.0	1.257	1.047	23015.9	378202.1	6.1	B31.8	
14015	23439.5	9136.9	1.257	1.047	25157.4	378514.4	6.6	B31.8	
14015	20789.2	9136.9	1.000	1.000	22708.4	381014.9	6.0	B31.8	
14008	20630.6	9136.9	1.000	1.000	22563.4	380226.4	5.9	B31.8	
14008	23686.4	9136.9	1.257	1.047	25387.6	378292.0	6.7	B31.8	
14009	26866.3	4688.4	1.257	1.047	27272.4	378072.0	7.2	B31.8	
14009	26866.3	4688.4	1.257	1.047	27272.4	378072.0	7.2	B31.8	
14010	27103.0	16584.9	1.257	1.047	31774.7	377916.8	8.4	B31.8	
14010	22335.2	16584.9	1.000	1.000	27819.5	378026.4	7.4	B31.8	
707	146025.7	16584.9	2.521	3.028	146964.5	374746.2	39.2	B31.8	
680	11250.4	7671.4	1.000	1.000	13617.0	372389.8	3.7	B31.8	
	8144.7	7671.	1.00	1.00	11188.	371426.	3.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
750		4	0	0	7	2			
750	8144.7	7671.4	1.000	1.000	11188.7	371426.2	3.0	B31.8	
17000	23266.6	7671.4	2.521	3.028	24498.7	370570.2	6.6	B31.8	
17000	22167.6	5170.5	2.521	3.028	22762.6	370615.7	6.1	B31.8	
754	7652.5	5170.5	1.000	1.000	9235.6	371447.8	2.5	B31.8	
754	7652.5	5170.5	1.000	1.000	9235.6	371447.8	2.5	B31.8	
755	7467.5	5170.5	1.000	1.000	9082.8	371407.6	2.4	B31.8	
17000	205254.5	8886.2	2.521	3.028	205446.7	380601.1	54.0	B31.8	
4229	42580.8	8886.2	1.000	1.000	43498.2	381442.3	11.4	B31.8	
4229	42580.8	8886.2	1.000	1.000	43498.2	381442.3	11.4	B31.8	
4230	16510.6	8886.2	1.000	1.000	18750.1	381372.4	4.9	B31.8	
4230	16510.6	8886.2	1.000	1.000	18750.1	381374.6	4.9	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17008	1482.0	8886.2	1.000	1.000	9008.9	381211.1	2.4	B31.8	
17008	1845.4	8886.2	1.257	1.047	9075.7	381199.9	2.4	B31.8	
17009	11111.8	5907.0	1.257	1.047	12584.3	381330.4	3.3	B31.8	
17009	11111.8	5907.0	1.257	1.047	12584.3	381330.4	3.3	B31.8	
17010	14463.0	768.9	1.257	1.047	14483.5	380973.9	3.8	B31.8	
17010	12600.6	768.9	1.000	1.000	12624.0	381030.6	3.3	B31.8	
17018	13781.4	768.9	1.000	1.000	13802.8	381142.3	3.6	B31.8	
17018	17321.2	768.9	1.257	1.047	17338.3	381071.5	4.5	B31.8	
17019	14784.1	948.7	1.257	1.047	14814.5	380384.2	3.9	B31.8	
17019	14784.1	948.7	1.257	1.047	14814.5	380384.2	3.9	B31.8	
17020	7941.7	1034.0	1.257	1.047	8008.7	379764.4	2.1	B31.8	
1702	6318.4	1034.	1.00	1.00	6402.4	380572.	1.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
0		0	0	0		1			
17025	1384.4	1034.0	1.000	1.000	1727.9	379727.1	0.5	B31.8	
17025	1384.4	1034.0	1.000	1.000	1727.9	379727.1	0.5	B31.8	
17029	11863.9	1569.9	1.257	1.047	11967.3	379602.1	3.2	B31.8	
17029	11863.9	1569.9	1.257	1.047	11967.3	379602.1	3.2	B31.8	
17030	15117.6	1554.6	1.257	1.047	15197.3	379405.0	4.0	B31.8	
17030	12029.6	1554.6	1.000	1.000	12129.6	379581.8	3.2	B31.8	
1225	17322.6	1554.6	1.000	1.000	17392.2	378005.1	4.6	B31.8	
1225	17322.6	1554.6	1.000	1.000	17392.2	378005.1	4.6	B31.8	
1230	17425.9	1554.6	1.000	1.000	17495.1	380913.4	4.6	B31.8	
1230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1240	18972.2	1554.6	1.000	1.000	19035.8	376232.6	5.1	B31.8	
1110	19831.1	1554.6	1.033	1.044	19891.9	377919.4	5.3	B31.8	
1110	15357.9	4282.3	1.033	1.044	15943.8	380604.9	4.2	B31.8	
1248	13222.7	4282.3	1.000	1.000	13898.8	381002.2	3.6	B31.8	
1248	15015.7	4282.3	1.257	1.047	15614.4	380822.8	4.1	B31.8	
1249	13786.7	3727.2	1.257	1.047	14281.6	380907.9	3.7	B31.8	
1249	13786.7	3727.2	1.257	1.047	14281.6	380907.9	3.7	B31.8	
1250	3644.4	8563.9	1.257	1.047	9307.1	380862.2	2.4	B31.8	
1250	3644.4	8563.9	1.257	1.047	9307.1	380862.2	2.4	B31.8	
17099	8681.2	4716.7	1.257	1.047	9879.8	380842.2	2.6	B31.8	
17099	8681.2	4716.7	1.257	1.047	9879.8	380842.2	2.6	B31.8	
17100	9143.5	904.0	1.257	1.047	9188.1	380749.4	2.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
17100	8207.3	904.0	1.000	1.000	8257.0	381036.7	2.2	B31.8	
17110	8173.9	904.0	1.000	1.000	8223.7	381028.5	2.2	B31.8	
17110	7975.6	2004.9	1.000	1.000	8223.7	380765.5	2.2	B31.8	
1260	12206.6	4038.2	1.000	1.000	12857.2	388834.4	3.3	B31.8	
1260	12684.6	2099.8	1.000	1.000	12857.2	389144.0	3.3	B31.8	
1270	9396.5	2099.8	1.000	1.000	9628.2	387314.7	2.5	B31.8	
755	7467.5	5170.5	1.000	1.000	9082.8	371407.6	2.4	B31.8	
760	3306.1	5170.5	1.000	1.000	6137.2	372051.2	1.6	B31.8	
760	3306.1	5170.5	1.000	1.000	6137.2	372051.3	1.6	B31.8	
19000	7439.7	5170.5	2.521	3.028	9060.0	371911.2	2.4	B31.8	
19000	9406.5	3259.0	2.521	3.028	9955.1	371907.8	2.7	B31.8	
	3308.6	3259.	1.00	1.00	4644.2	372169.	1.2	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
769		0	0	0		3			
769	3308.6	3259.0	1.000	1.000	4644.2	372169.3	1.2	B31.8	
770	2980.5	3259.0	1.000	1.000	4416.4	372166.1	1.2	B31.8	
19000	151828.1	11331.9	2.521	3.028	152250.5	381477.0	39.9	B31.8	
4299	33597.9	11331.9	1.000	1.000	35457.4	381296.0	9.3	B31.8	
4299	33597.9	11331.9	1.000	1.000	35457.4	381296.0	9.3	B31.8	
4300	17175.4	11331.9	1.000	1.000	20576.8	380948.2	5.4	B31.8	
4300	17175.4	11331.9	1.000	1.000	20576.8	380948.9	5.4	B31.8	
19009	6236.3	9860.3	1.257	1.047	11666.9	380786.4	3.1	B31.8	
19009	6236.3	9860.3	1.257	1.047	11666.9	380786.4	3.1	B31.8	
19010	11646.8	2971.8	1.257	1.047	12020.0	381259.6	3.2	B31.8	
19010	10998.5	2971.8	1.000	1.000	11392.9	381348.5	3.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
19018	6084.5	2971.8	1.000	1.000	6771.4	381315.6	1.8	B31.8	
19018	6924.5	2971.8	1.257	1.047	7535.3	381236.3	2.0	B31.8	
19019	2590.2	5463.4	1.257	1.047	6046.3	380945.4	1.6	B31.8	
19019	2590.2	5463.4	1.257	1.047	6046.3	380945.4	1.6	B31.8	
19020	4404.2	4870.8	1.257	1.047	6566.7	380281.6	1.7	B31.8	
19020	3824.7	4870.8	1.000	1.000	6193.0	380646.5	1.6	B31.8	
19025	6947.4	4870.8	1.000	1.000	8484.7	379865.7	2.2	B31.8	
19025	6947.4	4870.8	1.000	1.000	8484.7	379865.7	2.2	B31.8	
19029	18659.0	1698.0	1.257	1.047	18736.1	380195.2	4.9	B31.8	
19029	18659.0	1698.0	1.257	1.047	18736.1	380195.2	4.9	B31.8	
19030	20117.5	2371.2	1.257	1.047	20256.8	379970.1	5.3	B31.8	
1903	16215.	2371.	1.00	1.00	16387.	380100.	4.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
0	2	2	0	0	7	5			
1925	9627.8	2371.2	1.000	1.000	9915.5	378075.7	2.6	B31.8	
1925	9627.8	2371.2	1.000	1.000	9915.5	378075.7	2.6	B31.8	
1930	9035.8	2371.2	1.000	1.000	9341.7	380733.0	2.5	B31.8	
1930	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1940	5072.3	2371.2	1.000	1.000	5599.2	376006.2	1.5	B31.8	
1950	4845.8	2371.2	1.033	1.044	5394.8	377728.5	1.4	B31.8	
1950	10680.5	5418.4	1.033	1.044	11976.3	380447.0	3.1	B31.8	
1958	8604.7	5418.4	1.000	1.000	10168.6	380996.8	2.7	B31.8	
1958	10417.5	5418.4	1.257	1.047	11742.3	380784.1	3.1	B31.8	
1959	10752.0	1520.9	1.257	1.047	10859.0	380870.0	2.9	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1959	10752.0	1520.9	1.257	1.047	10859.0	380870.0	2.9	B31.8	
1960	4236.0	1971.6	1.257	1.047	4672.4	380820.1	1.2	B31.8	
1960	4236.0	1971.6	1.257	1.047	4672.4	380820.1	1.2	B31.8	
19099	4643.0	224.9	1.257	1.047	4648.5	380795.0	1.2	B31.8	
19099	4643.0	224.9	1.257	1.047	4648.5	380795.0	1.2	B31.8	
19100	4294.4	993.8	1.257	1.047	4407.9	380726.3	1.2	B31.8	
19100	3419.2	993.8	1.000	1.000	3560.7	381058.0	0.9	B31.8	
19110	3386.0	993.8	1.000	1.000	3528.9	381049.1	0.9	B31.8	
19110	3386.0	993.8	1.000	1.000	3528.9	380721.2	0.9	B31.8	
1970	4294.0	2001.7	1.000	1.000	4737.6	388748.2	1.2	B31.8	
1970	4294.0	2001.7	1.000	1.000	4737.6	389145.5	1.2	B31.8	
1980	7744.5	2001.7	1.000	1.000	7999.1	387195.1	2.1	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
770	2980.5	3259.0	1.000	1.000	4416.4	372166.2	1.2	B31.8	
780	467.9	3259.0	1.000	1.000	3292.4	372445.0	0.9	B31.8	
780	467.9	3259.0	1.000	1.000	3292.4	372445.1	0.9	B31.8	
13000	1838.3	3259.0	2.521	3.028	3741.7	372299.3	1.0	B31.8	
13000	4267.2	1447.0	2.521	3.028	4505.9	372297.0	1.2	B31.8	
789	1434.4	1447.0	1.000	1.000	2037.5	372428.1	0.5	B31.8	
789	1434.4	1447.0	1.000	1.000	2037.5	372428.1	0.5	B31.8	
790	1212.1	1447.0	1.000	1.000	1887.6	372452.1	0.5	B31.8	
13000	202181.0	14041.1	2.521	3.028	202667.9	381122.9	53.2	B31.8	
4399	42013.0	14041.1	1.000	1.000	44297.2	381188.6	11.6	B31.8	
4399	42013.0	14041.1	1.000	1.000	44297.2	381188.6	11.6	B31.8	
	16057.	14041	1.00	1.00	21330.	380868.	5.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
4400	6	.1	0	0	7	8			
4400	16057.6	14041.1	1.000	1.000	21330.7	380869.2	5.6	B31.8	
13008	5379.2	14041.1	1.000	1.000	15036.2	380564.5	4.0	B31.8	
13008	5981.7	14041.1	1.257	1.047	15262.1	380535.2	4.0	B31.8	
13009	6232.6	13535.6	1.257	1.047	14901.6	380720.1	3.9	B31.8	
13009	6232.6	13535.6	1.257	1.047	14901.6	380720.1	3.9	B31.8	
13010	13852.9	5899.7	1.257	1.047	15056.9	381154.3	4.0	B31.8	
13010	13060.6	5899.7	1.000	1.000	14331.3	381237.9	3.8	B31.8	
13018	6787.9	5899.7	1.000	1.000	8993.5	381309.3	2.4	B31.8	
13018	7317.0	5899.7	1.257	1.047	9399.2	381206.8	2.5	B31.8	
13019	6474.6	8721.1	1.257	1.047	10861.8	381054.9	2.9	B31.8	
13019	6474.6	8721.1	1.257	1.047	10861.8	381054.9	2.9	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
13020	13418.7	6601.0	1.257	1.047	14954.5	380376.6	3.9	B31.8	
13020	11117.8	6601.0	1.000	1.000	12929.8	380688.2	3.4	B31.8	
13025	14343.4	6601.0	1.000	1.000	15789.5	379908.6	4.2	B31.8	
13025	14343.4	6601.0	1.000	1.000	15789.5	379908.6	4.2	B31.8	
13029	27186.4	1252.5	1.257	1.047	27215.3	380297.9	7.2	B31.8	
13029	27186.4	1252.5	1.257	1.047	27215.3	380297.9	7.2	B31.8	
13030	27551.4	4495.7	1.257	1.047	27915.8	380067.2	7.3	B31.8	
13030	22171.9	4495.7	1.000	1.000	22623.1	380173.0	6.0	B31.8	
1425	7201.0	4495.7	1.000	1.000	8489.2	378184.1	2.2	B31.8	
1425	7201.0	4495.7	1.000	1.000	8489.2	378184.1	2.2	B31.8	
1430	6014.3	4495.7	1.000	1.000	7508.9	380622.6	2.0	B31.8	
	0.0	0.0	0.00	0.00	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1430			0	0					
1440	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
1440	3097.6	4495.7	1.000	1.000	5459.5	375355.1	1.5	B31.8	
1360	3944.2	4495.7	1.033	1.044	5980.6	377051.7	1.6	B31.8	
1360	6317.2	5565.6	1.033	1.044	8419.2	380803.0	2.2	B31.8	
1448	6558.1	5565.6	1.000	1.000	8601.4	381124.6	2.3	B31.8	
1448	8188.9	5565.6	1.257	1.047	9901.2	380883.4	2.6	B31.8	
1449	8365.4	5593.7	1.257	1.047	10063.3	380893.8	2.6	B31.8	
1449	8365.4	5593.7	1.257	1.047	10063.3	380893.8	2.6	B31.8	
1450	4037.9	3742.1	1.257	1.047	5505.3	380842.4	1.4	B31.8	
1450	3662.2	3742.1	1.000	1.000	5236.0	380887.0	1.4	B31.8	
15098	3594.4	3742.1	1.000	1.000	5188.7	380885.4	1.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
15098	3950.7	3742.1	1.257	1.047	5441.7	380840.9	1.4	B31.8	
15099	4398.3	4177.8	1.257	1.047	6066.3	380790.5	1.6	B31.8	
15099	4398.3	4177.8	1.257	1.047	6066.3	380790.5	1.6	B31.8	
15100	7366.4	769.1	1.257	1.047	7406.5	380802.2	1.9	B31.8	
15100	6768.9	769.1	1.000	1.000	6812.5	381167.8	1.8	B31.8	
15110	6775.3	769.1	1.000	1.000	6818.8	381161.9	1.8	B31.8	
15110	6814.6	239.2	1.000	1.000	6818.8	380818.0	1.8	B31.8	
1460	14921.6	481.8	1.000	1.000	14929.4	389151.0	3.8	B31.8	
1460	14802.4	1943.1	1.000	1.000	14929.4	389568.8	3.8	B31.8	
1470	20237.8	1943.1	1.000	1.000	20330.8	387969.6	5.2	B31.8	
790	1212.1	1447.0	1.000	1.000	1887.6	372452.2	0.5	B31.8	
800	1004.0	1447.0	1.000	1.000	1761.2	372212.1	0.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
800	1004.0	1447.0	1.000	1.000	1761.2	372212.2	0.5	B31.8	
810	2751.5	1447.0	1.000	1.000	3108.8	372068.7	0.8	B31.8	
810	2751.5	1447.0	1.000	1.000	3108.8	372068.8	0.8	B31.8	
820	4765.4	1447.0	1.000	1.000	4980.2	372368.5	1.3	B31.8	
820	4765.4	1447.0	1.000	1.000	4980.2	372368.6	1.3	B31.8	
12000	12339.6	1447.0	2.521	3.028	12424.2	372428.9	3.3	B31.8	
12000	19.5	0.0	2.521	3.028	19.5	372465.4	0.0	B31.8	
829	3.6	0.0	1.000	1.000	3.6	372468.2	0.0	B31.8	
829	3.6	0.0	1.000	1.000	3.6	372468.2	0.0	B31.8	
830	0.0	0.0	1.000	1.000	0.0	372469.1	0.0	B31.8	
12000	325245.1	20843.2	2.521	3.028	325912.3	380742.0	85.6	B31.8	
	65452.	20843	1.00	1.00	68690.	381211.	18.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
831	0	.2	0	0	6	7			
831	65452.0	20843.2	1.000	1.000	68690.6	381211.7	18.0	B31.8	
832	16174.5	20843.2	1.000	1.000	26382.8	381126.5	6.9	B31.8	
832	16174.5	20843.2	1.000	1.000	26382.8	381127.9	6.9	B31.8	
12008	10636.8	20843.2	1.000	1.000	23400.4	380967.0	6.1	B31.8	
12008	11873.1	20843.2	1.257	1.047	23987.7	380912.8	6.3	B31.8	
12009	7196.3	21939.9	1.257	1.047	23090.0	381046.5	6.1	B31.8	
12009	7196.3	21939.9	1.257	1.047	23090.0	381046.5	6.1	B31.8	
12010	18457.9	12077.2	1.257	1.047	22058.0	380953.2	5.8	B31.8	
12010	17619.0	12077.2	1.000	1.000	21360.9	381111.2	5.6	B31.8	
12015	17586.5	12077.2	1.000	1.000	21334.1	381104.4	5.6	B31.8	
12015	17586.5	12077.2	1.000	1.000	21334.1	381104.4	5.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
12017	6725.3	12077.2	1.000	1.000	13823.5	378978.8	3.6	B31.8	
12017	6725.3	12077.2	1.000	1.000	13823.5	378978.8	3.6	B31.8	
12018	20879.9	12077.2	1.000	1.000	24121.2	381356.7	6.3	B31.8	
12018	25318.6	12077.2	1.257	1.047	28051.6	381095.5	7.4	B31.8	
12019	27609.4	15846.0	1.257	1.047	31833.6	380617.3	8.4	B31.8	
12019	27609.4	15846.0	1.257	1.047	31833.6	380617.3	8.4	B31.8	
12020	34775.3	10881.7	1.257	1.047	36438.1	380068.7	9.6	B31.8	
12020	28344.0	10881.7	1.000	1.000	30361.1	380758.7	8.0	B31.8	
12025	30787.4	10881.7	1.000	1.000	32653.9	379933.9	8.6	B31.8	
12025	30787.4	10881.7	1.000	1.000	32653.9	379933.9	8.6	B31.8	
12029	45044.7	1258.1	1.257	1.047	45062.3	379928.3	11.9	B31.8	
1202	45044.	1258.	1.25	1.04	45062.	379928.	11.9	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9	7	1	7	7	3	3			
12030	42699.6	8304.8	1.257	1.047	43499.8	379706.6	11.5	B31.8	
12030	34376.9	8304.8	1.000	1.000	35365.8	379810.2	9.3	B31.8	
885	4623.5	8304.8	1.000	1.000	9505.1	378016.3	2.5	B31.8	
885	4623.5	8304.8	1.000	1.000	9505.1	378016.3	2.5	B31.8	
890	4798.8	8304.8	1.000	1.000	9591.6	380787.3	2.5	B31.8	
890	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
900	22853.9	8304.8	1.000	1.000	24316.1	375297.9	6.5	B31.8	
910	25678.4	8304.8	1.033	1.044	26988.0	376961.7	7.2	B31.8	
910	6705.8	7620.8	1.033	1.044	10151.1	380803.6	2.7	B31.8	
918	10929.0	7620.8	1.000	1.000	13323.7	381023.1	3.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
918	12418.9	7620.8	1.257	1.047	14570.7	380761.6	3.8	B31.8	
919	9985.4	12571.0	1.257	1.047	16054.2	380774.5	4.2	B31.8	
919	9985.4	12571.0	1.257	1.047	16054.2	380774.5	4.2	B31.8	
920	4311.4	12571.1	1.257	1.047	13289.8	380759.3	3.5	B31.8	
920	4311.4	12571.1	1.257	1.047	13289.8	380759.3	3.5	B31.8	
15009	10863.9	10157.3	1.257	1.047	14872.6	380762.3	3.9	B31.8	
15009	10863.9	10157.3	1.257	1.047	14872.6	380762.3	3.9	B31.8	
15010	17974.7	620.3	1.257	1.047	17985.4	380746.1	4.7	B31.8	
15010	17018.7	620.3	1.000	1.000	17030.0	380986.7	4.5	B31.8	
15020	17050.0	620.3	1.000	1.000	17061.3	380981.9	4.5	B31.8	
15020	16733.7	3327.4	1.000	1.000	17061.3	380760.8	4.5	B31.8	
930	37248.3	6702.0	1.000	1.000	37846.4	389017.1	9.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
930	37842.2	568.8	1.000	1.000	37846.4	389324.1	9.7	B31.8	
940	46457.1	568.8	1.000	1.000	46460.6	387835.4	12.0	B31.8	
680	11250.4	7671.4	1.000	1.000	13617.0	372389.7	3.7	B31.8	
14000	14843.5	7671.4	1.000	1.000	16708.7	371625.8	4.5	B31.8	
14000	14843.5	7671.4	1.000	1.000	16708.7	371625.7	4.5	B31.8	
690	18187.0	7671.4	1.000	1.000	19738.7	371000.8	5.3	B31.8	
690	18187.0	7671.4	1.000	1.000	19738.7	371000.8	5.3	B31.8	
691	24440.3	7671.4	1.000	1.000	25615.9	369897.1	6.9	B31.8	
691	30696.6	7671.4	1.269	1.057	31640.7	369896.9	8.6	B31.8	
692	33955.0	1543.2	1.269	1.057	33990.1	369118.4	9.2	B31.8	
692	33955.0	1543.2	1.269	1.057	33990.1	369120.4	9.2	B31.8	
	27547.	4157.	1.26	1.05	27859.	368712.	7.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
700	5	4	9	7	4	1			
700	21903.5	4157.4	1.000	1.000	22294.6	368716.4	6.0	B31.8	
704	19987.6	4157.4	1.000	1.000	20415.3	368693.3	5.5	B31.8	
704	19987.6	4157.4	1.000	1.000	20415.3	368693.3	5.5	B31.8	
705	14456.1	4157.4	1.000	1.000	15042.0	368626.1	4.1	B31.8	
705	14456.1	4157.4	1.000	1.000	15042.0	368617.1	4.1	B31.8	
740	12893.2	4157.4	1.000	1.000	13546.9	368580.9	3.7	B31.8	
740	12893.2	4157.4	1.000	1.000	13546.9	368580.9	3.7	B31.8	
745	8932.7	4157.4	1.000	1.000	9852.8	368182.3	2.7	B31.8	
745	8932.7	4157.4	1.000	1.000	9852.8	368182.3	2.7	B31.8	
707	34235.1	4157.4	2.521	3.028	34486.7	364254.8	9.5	B31.8	
707	35358.7	2321.1	2.521	3.028	35434.8	364111.6	9.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
709	39477.7	20575.4	1.269	1.057	44517.8	368429.9	12.1	B31.8	
709	39477.7	20575.4	1.269	1.057	44517.8	368429.9	12.1	B31.8	
710	27949.9	29847.5	1.269	1.057	40891.0	370325.8	11.0	B31.8	
710	22086.3	29847.5	1.000	1.000	37130.5	370338.8	10.0	B31.8	
719	17502.6	26647.1	1.269	1.057	31881.1	371330.1	8.6	B31.8	
719	17502.6	26647.1	1.269	1.057	31881.1	371330.1	8.6	B31.8	
720	26021.2	10907.8	1.269	1.057	28214.9	370521.9	7.6	B31.8	
720	24607.7	10907.8	1.000	1.000	26916.9	370521.9	7.3	B31.8	
730	24554.5	10907.8	1.000	1.000	26868.2	370522.7	7.3	B31.8	
730	24554.5	10907.8	1.000	1.000	26868.2	370522.7	7.3	B31.8	
4000	24313.6	10907.8	1.096	1.128	26648.3	370562.4	7.2	B31.8	
	17387.	2266.	1.09	1.12	17535.	370345.	4.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
4000	9	2	6	8	0	8			
4100	12894.8	2266.2	1.000	1.000	13092.4	370602.5	3.5	B31.8	
4100	12894.8	2266.2	1.000	1.000	13092.4	370602.5	3.5	B31.8	
4110	11945.6	2266.2	1.000	1.000	12158.7	370511.2	3.3	B31.8	
4110	11945.6	2266.2	1.000	1.000	12158.7	370511.2	3.3	B31.8	
4120	11828.5	2266.2	1.000	1.000	12043.6	370776.1	3.2	B31.8	
4120	11828.5	2266.2	1.000	1.000	12043.6	370776.1	3.2	B31.8	
4130	12401.3	2266.2	1.000	1.000	12606.6	367625.0	3.4	B31.8	
4130	12401.3	2266.2	1.000	1.000	12606.6	367625.0	3.4	B31.8	
4140	13863.6	2266.2	1.096	1.128	14047.6	370959.5	3.8	B31.8	
4140	10361.3	8477.0	1.096	1.128	13387.2	370914.6	3.6	B31.8	
7199	12362.9	4492.5	1.269	1.057	13153.8	370778.3	3.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7199	12362.9	4492.5	1.269	1.057	13153.8	370778.3	3.5	B31.8	
7200	13132.1	80.2	1.269	1.057	13132.4	370613.1	3.5	B31.8	
7200	12235.6	80.2	1.000	1.000	12235.9	370685.0	3.3	B31.8	
7210	11696.8	80.2	1.000	1.000	11697.1	367925.3	3.2	B31.8	
7210	11696.8	80.2	1.000	1.000	11697.1	367925.3	3.2	B31.8	
7220	7909.3	80.2	1.000	1.000	7909.7	371637.5	2.1	B31.8	
7220	7909.3	80.2	1.000	1.000	7909.7	371637.5	2.1	B31.8	
7230	3414.8	80.2	1.000	1.000	3415.7	369128.1	0.9	B31.8	
7230	3414.8	80.2	1.000	1.000	3415.7	369128.1	0.9	B31.8	
7240	996.3	80.2	1.096	1.128	999.5	371931.1	0.3	B31.8	
7240	2361.6	26.4	1.096	1.128	2361.8	370273.8	0.6	B31.8	
7600	2239.1	26.4	1.000	1.000	2239.2	372062.3	0.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7600	2218.7	302.5	1.000	1.000	2239.2	371977.1	0.6	B31.8	
7610	5100.9	664.3	1.000	1.000	5143.9	368066.8	1.4	B31.8	
7610	5143.9	29.3	1.000	1.000	5143.9	368195.2	1.4	B31.8	
7615	5240.0	29.3	1.000	1.000	5240.1	365926.6	1.4	B31.8	
7615	5210.9	551.9	1.000	1.000	5240.1	365995.8	1.4	B31.8	
7620	10462.3	1065.1	1.000	1.000	10516.4	367848.0	2.9	B31.8	
7620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7650	11399.4	19.5	1.000	1.000	11399.4	371595.1	3.1	B31.8	
7660	13950.5	19.5	1.000	1.000	13950.5	373345.4	3.7	B31.8	
7660	13950.5	19.5	1.000	1.000	13950.5	373345.4	3.7	B31.8	
	17578.	19.5	1.00	1.00	17578.	364510.	4.8	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7670	0		0	0	0	2			
7670	17578.0	19.5	1.000	1.000	17578.0	364510.2	4.8	B31.8	
7679	22153.1	28.6	1.257	1.048	22153.1	373113.5	5.9	B31.8	
7679	22153.1	28.6	1.257	1.048	22153.1	373113.5	5.9	B31.8	
7680	15337.5	21.7	1.257	1.048	15337.5	372655.8	4.1	B31.8	
7680	12198.9	21.7	1.000	1.000	12199.0	372659.0	3.3	B31.8	
7690	44336.5	21.7	1.000	1.000	44336.5	369814.1	12.0	B31.8	
7690	44336.5	21.7	1.000	1.000	44336.5	369814.1	12.0	B31.8	
7699	68879.6	22.5	1.257	1.048	68879.6	372894.0	18.5	B31.8	
7699	68879.6	22.5	1.257	1.048	68879.6	372894.0	18.5	B31.8	
7700	71376.5	11.0	1.257	1.048	71376.5	371605.8	19.2	B31.8	
7700	56770.6	11.0	1.000	1.000	56770.6	371605.8	15.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7708	51697.5	11.0	1.000	1.000	51697.5	371542.8	13.9	B31.8	
7708	64998.2	11.0	1.257	1.048	64998.2	371542.8	17.5	B31.8	
7709	61713.6	7.2	1.257	1.048	61713.6	372849.9	16.6	B31.8	
7709	61713.6	7.2	1.257	1.048	61713.6	372849.9	16.6	B31.8	
7710	54571.7	0.1	1.257	1.048	54571.7	371558.0	14.7	B31.8	
7710	43404.7	0.1	1.000	1.000	43404.7	371563.7	11.7	B31.8	
7720	38377.4	0.1	1.000	1.000	38377.4	369847.9	10.4	B31.8	
7720	38377.4	0.1	1.000	1.000	38377.4	369847.9	10.4	B31.8	
7728	18158.0	0.1	1.000	1.000	18158.0	373126.4	4.9	B31.8	
7728	22829.7	0.1	1.257	1.048	22829.7	373109.6	6.1	B31.8	
7729	29971.6	0.5	1.257	1.048	29971.6	373631.5	8.0	B31.8	
	29971.	0.5	1.25	1.04	29971.	373631.	8.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7729	6		7	8	6	5			
7730	33256.1	0.0	1.257	1.048	33256.1	373139.4	8.9	B31.8	
7730	26450.9	0.0	1.000	1.000	26450.9	373139.4	7.1	B31.8	
7740	28478.7	0.0	1.000	1.000	28478.7	364196.2	7.8	B31.8	
7740	28478.7	0.0	1.000	1.000	28478.7	364196.2	7.8	B31.8	
7750	32112.3	0.0	1.000	1.000	32112.3	373898.3	8.6	B31.8	
7750	32112.3	0.0	1.000	1.000	32112.3	373898.3	8.6	B31.8	
7760	22034.0	0.0	1.000	1.000	22034.0	371429.5	5.9	B31.8	
7760	22034.0	0.0	1.000	1.000	22034.0	371429.5	5.9	B31.8	
7770	20887.1	0.0	1.000	1.000	20887.1	372699.0	5.6	B31.8	
7770	20887.1	0.0	1.000	1.000	20887.1	372699.0	5.6	B31.8	
7780	12963.5	0.0	1.000	1.000	12963.5	373080.0	3.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7780	12963.5	0.0	1.000	1.000	12963.5	373080.0	3.5	B31.8	
7790	11955.7	0.0	1.000	1.000	11955.7	372077.7	3.2	B31.8	
7790	11955.7	0.0	1.000	1.000	11955.7	372077.7	3.2	B31.8	
7800	1877.4	0.0	1.000	1.000	1877.4	371911.2	0.5	B31.8	
7800	1877.4	0.0	1.000	1.000	1877.4	371911.2	0.5	B31.8	
7810	8201.0	0.0	1.000	1.000	8201.0	371951.6	2.2	B31.8	
7810	8201.0	0.0	1.000	1.000	8201.0	371951.6	2.2	B31.8	
7820	4100.5	0.0	1.000	1.000	4100.5	371951.2	1.1	B31.8	
7820	4100.5	0.0	1.000	1.000	4100.5	371951.2	1.1	B31.8	
7830	0.0	0.0	1.000	1.000	0.0	371912.4	0.0	B31.8	
7830	0.0	0.0	1.000	1.000	0.0	371912.4	0.0	B31.8	
7840	0.0	0.0	1.000	1.000	0.0	372073.4	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7840	0.0	0.0	1.000	1.000	0.0	372073.4	0.0	B31.8	
7850	0.0	0.0	1.000	1.000	0.0	373197.7	0.0	B31.8	
7850	0.0	0.0	1.000	1.000	0.0	373197.7	0.0	B31.8	
7860	0.0	0.0	1.000	1.000	0.0	372576.1	0.0	B31.8	
7860	0.0	0.0	1.000	1.000	0.0	372576.1	0.0	B31.8	
7870	0.0	0.0	1.000	1.000	0.0	371446.3	0.0	B31.8	
7870	0.0	0.0	1.000	1.000	0.0	371446.3	0.0	B31.8	
7880	0.0	0.0	1.000	1.000	0.0	373878.3	0.0	B31.8	
7880	0.0	0.0	1.000	1.000	0.0	373878.3	0.0	B31.8	
7890	0.0	0.0	1.000	1.000	0.0	373921.0	0.0	B31.8	
7240	3352.6	2.0	1.096	1.128	3352.6	370788.6	0.9	B31.8	
	3031.8	2.0	1.00	1.00	3031.8	369847.	0.8	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7250			0	0		7			
7250	3008.3	376.7	1.000	1.000	3031.8	369878.3	0.8	B31.8	
7260	6528.9	827.2	1.000	1.000	6581.1	364654.6	1.8	B31.8	
7260	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
7270	6385.9	13.9	1.000	1.000	6385.9	368946.0	1.7	B31.8	
7280	6296.7	13.9	1.000	1.000	6296.8	369613.0	1.7	B31.8	
7280	6296.7	13.9	1.000	1.000	6296.8	369613.0	1.7	B31.8	
7290	6225.3	13.9	1.000	1.000	6225.3	370749.4	1.7	B31.8	
7290	6225.3	13.9	1.000	1.000	6225.3	370749.4	1.7	B31.8	
7295	5731.5	13.9	1.000	1.000	5731.5	371978.0	1.5	B31.8	
7295	5731.5	13.9	1.000	1.000	5731.5	371978.0	1.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7300	5668.7	13.9	1.000	1.000	5668.7	371304.9	1.5	B31.8	
7300	5668.7	13.9	1.000	1.000	5668.7	371304.9	1.5	B31.8	
7320	5040.7	13.9	1.000	1.000	5040.7	370876.3	1.4	B31.8	
7320	5040.7	13.9	1.000	1.000	5040.7	370876.3	1.4	B31.8	
7330	4412.7	13.9	1.000	1.000	4412.7	370990.9	1.2	B31.8	
7330	4412.7	13.9	1.000	1.000	4412.7	370990.9	1.2	B31.8	
7340	332.8	13.9	1.000	1.000	333.1	370936.4	0.1	B31.8	
7340	332.8	13.9	1.000	1.000	333.1	370936.4	0.1	B31.8	
7350	5078.2	13.9	1.000	1.000	5078.2	371051.4	1.4	B31.8	
7350	5078.2	13.9	1.000	1.000	5078.2	371051.4	1.4	B31.8	
7370	5927.0	13.9	1.000	1.000	5927.1	370621.1	1.6	B31.8	
	5927.0	13.9	1.00	1.00	5927.1	370621.	1.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7370			0	0		1			
7373	7179.4	13.9	1.000	1.000	7179.5	371758.2	1.9	B31.8	
7373	7179.4	13.9	1.000	1.000	7179.5	371758.2	1.9	B31.8	
7376	15831.8	13.9	1.000	1.000	15831.8	372054.8	4.3	B31.8	
7376	15831.8	13.9	1.000	1.000	15831.8	372054.8	4.3	B31.8	
7380	16932.3	13.9	1.000	1.000	16932.3	372319.7	4.5	B31.8	
7380	16932.3	13.9	1.000	1.000	16932.3	372319.7	4.5	B31.8	
7400	27937.6	13.9	1.000	1.000	27937.6	365591.2	7.6	B31.8	
7400	27937.6	13.9	1.000	1.000	27937.6	365591.2	7.6	B31.8	
7409	32892.7	10.5	1.268	1.057	32892.7	371900.6	8.8	B31.8	
7409	32892.7	10.5	1.268	1.057	32892.7	371900.6	8.8	B31.8	
7410	25058.9	2.2	1.268	1.057	25058.9	371666.9	6.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7410	19755.5	2.2	1.000	1.000	19755.5	371724.3	5.3	B31.8	
7415	29162.4	2.2	1.000	1.000	29162.4	369174.6	7.9	B31.8	
7415	29162.4	2.2	1.000	1.000	29162.4	369174.6	7.9	B31.8	
7419	48309.6	1.5	1.268	1.057	48309.6	371741.5	13.0	B31.8	
7419	48309.6	1.5	1.268	1.057	48309.6	371741.5	13.0	B31.8	
7420	51444.2	0.0	1.268	1.057	51444.2	370533.6	13.9	B31.8	
7420	40556.6	0.0	1.000	1.000	40556.6	370533.6	10.9	B31.8	
7430	39857.9	0.0	1.000	1.000	39857.9	365699.5	10.9	B31.8	
7430	39857.9	0.0	1.000	1.000	39857.9	365699.5	10.9	B31.8	
7438	39159.2	0.0	1.000	1.000	39159.2	370504.1	10.6	B31.8	
7438	49671.7	0.0	1.268	1.057	49671.7	370504.1	13.4	B31.8	
7439	46270.9	0.1	1.268	1.057	46270.9	371706.3	12.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7439	46270.9	0.1	1.268	1.057	46270.9	371706.3	12.4	B31.8	
7440	38326.7	0.2	1.268	1.057	38326.7	370019.2	10.4	B31.8	
7440	30215.3	0.2	1.000	1.000	30215.3	370034.1	8.2	B31.8	
7445	27468.2	0.2	1.000	1.000	27468.2	369161.3	7.4	B31.8	
7445	27468.2	0.2	1.000	1.000	27468.2	369161.3	7.4	B31.8	
7449	35152.0	0.2	1.268	1.057	35152.0	371973.4	9.5	B31.8	
7449	35152.0	0.2	1.268	1.057	35152.0	371973.4	9.5	B31.8	
7450	38552.8	0.0	1.268	1.057	38552.8	371341.7	10.4	B31.8	
7450	30393.5	0.0	1.000	1.000	30393.5	371341.7	8.2	B31.8	
7460	30858.6	0.0	1.000	1.000	30858.6	365580.0	8.4	B31.8	
7460	30858.6	0.0	1.000	1.000	30858.6	365580.0	8.4	B31.8	
	15429.	0.0	1.00	1.00	15429.	371879.	4.1	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7480	3		0	0	3	0			
7480	15429.3	0.0	1.000	1.000	15429.3	371879.0	4.1	B31.8	
7482	13673.4	0.0	1.000	1.000	13673.4	372154.6	3.7	B31.8	
7482	13673.4	0.0	1.000	1.000	13673.4	372154.6	3.7	B31.8	
7485	1542.9	0.0	1.000	1.000	1542.9	371775.9	0.4	B31.8	
7485	1542.9	0.0	1.000	1.000	1542.9	371775.9	0.4	B31.8	
7490	0.0	0.0	1.000	1.000	0.0	372489.8	0.0	B31.8	
7490	0.0	0.0	1.000	1.000	0.0	372489.8	0.0	B31.8	
7500	0.0	0.0	1.000	1.000	0.0	372523.5	0.0	B31.8	
4140	0.0	0.0	1.096	1.128	0.0	372263.3	0.0	B31.8	
4150	0.0	0.0	1.000	1.000	0.0	372469.1	0.0	B31.8	
4000	35734.4	1031.2	1.096	1.128	35749.3	370557.9	9.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
4005	26220.9	1031.2	1.000	1.000	26241.2	369472.3	7.1	B31.8	
4005	26220.9	1031.2	1.000	1.000	26241.2	369472.3	7.1	B31.8	
4010	15442.0	1031.2	1.000	1.000	15476.4	371728.6	4.2	B31.8	
4010	15442.0	1031.2	1.000	1.000	15476.4	371728.6	4.2	B31.8	
4020	5146.7	1031.2	1.000	1.000	5248.9	370764.6	1.4	B31.8	
4020	5146.7	1031.2	1.000	1.000	5248.9	370764.6	1.4	B31.8	
4030	6155.6	1031.2	1.000	1.000	6241.4	371490.4	1.7	B31.8	
4030	6155.6	1031.2	1.000	1.000	6241.4	371490.4	1.7	B31.8	
4040	3197.4	1031.2	1.000	1.000	3359.5	370029.1	0.9	B31.8	
4040	3197.4	1031.2	1.000	1.000	3359.5	370029.1	0.9	B31.8	
4050	1501.5	1031.2	1.000	1.000	1821.5	369713.4	0.5	B31.8	
	1501.5	1031.	1.00	1.00	1821.5	369713.	0.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
4050		2	0	0		4			
7000	1509.0	1031.2	1.000	1.000	1827.7	372100.4	0.5	B31.8	
7000	1509.0	1031.2	1.000	1.000	1827.7	372100.4	0.5	B31.8	
7010	1618.9	1031.2	1.000	1.000	1919.5	367018.3	0.5	B31.8	
7010	1618.9	1031.2	1.000	1.000	1919.5	367018.3	0.5	B31.8	
7032	1503.9	1031.2	1.000	1.000	1823.4	372077.1	0.5	B31.8	
7032	1906.7	1031.2	1.269	1.057	2167.7	371391.9	0.6	B31.8	
7031	2033.6	684.9	1.269	1.057	2145.8	371551.3	0.6	B31.8	
7031	2033.6	684.9	1.269	1.057	2145.8	371551.3	0.6	B31.8	
7030	2074.2	0.0	1.269	1.057	2074.2	372097.8	0.6	B31.8	
7030	1712.7	0.0	1.000	1.000	1712.7	372097.8	0.5	B31.8	
7040	1350.7	0.0	1.000	1.000	1350.7	365961.3	0.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7040	1350.7	0.0	1.000	1.000	1350.7	365961.3	0.4	B31.8	
7050	1198.6	0.0	1.000	1.000	1198.6	369806.5	0.3	B31.8	
7050	1198.6	0.0	1.000	1.000	1198.6	369806.5	0.3	B31.8	
7060	835.1	0.0	1.000	1.000	835.1	371342.3	0.2	B31.8	
7060	835.1	0.0	1.000	1.000	835.1	371342.3	0.2	B31.8	
7070	731.0	0.0	1.000	1.000	731.0	371536.1	0.2	B31.8	
7070	731.0	0.0	1.000	1.000	731.0	371536.1	0.2	B31.8	
7080	413.1	0.0	1.000	1.000	413.1	369302.0	0.1	B31.8	
7080	413.1	0.0	1.000	1.000	413.1	369302.0	0.1	B31.8	
7090	313.7	0.0	1.000	1.000	313.7	372326.4	0.1	B31.8	
7090	313.7	0.0	1.000	1.000	313.7	372326.4	0.1	B31.8	
7100	0.0	0.0	1.000	1.000	0.0	372457.7	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
7100	0.0	0.0	1.000	1.000	0.0	372457.7	0.0	B31.8	
7110	0.0	0.0	1.000	1.000	0.0	372469.1	0.0	B31.8	
570	26613.7	3193.7	1.033	1.044	26804.7	376044.0	7.1	B31.8	
578	22020.7	3193.7	1.000	1.000	22251.1	379825.8	5.9	B31.8	
578	23605.3	3193.7	1.257	1.047	23820.4	379723.6	6.3	B31.8	
579	18373.4	11914.7	1.257	1.047	21898.4	380134.0	5.8	B31.8	
579	18373.4	11914.7	1.257	1.047	21898.4	380134.0	5.8	B31.8	
580	2587.4	18972.2	1.257	1.047	19147.9	380113.8	5.0	B31.8	
580	2587.4	18972.2	1.257	1.047	19147.9	380113.8	5.0	B31.8	
16009	14261.9	12986.1	1.257	1.047	19288.3	379977.9	5.1	B31.8	
16009	14261.9	12986.1	1.257	1.047	19288.3	379977.9	5.1	B31.8	
1601	18579.	464.3	1.25	1.04	18584.	379615.	4.9	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
0	0		7	7	8	8			
16010	17558.2	464.3	1.000	1.000	17564.3	379797.9	4.6	B31.8	
16020	17535.4	464.3	1.000	1.000	17541.5	379792.9	4.6	B31.8	
16020	17387.3	2320.9	1.000	1.000	17541.5	379590.8	4.6	B31.8	
590	32572.0	4674.7	1.000	1.000	32905.8	386648.6	8.5	B31.8	
590	32899.7	633.0	1.000	1.000	32905.8	386990.8	8.5	B31.8	
600	29200.8	633.0	1.000	1.000	29207.7	385924.9	7.6	B31.8	
350	3038.4	6398.4	1.482	1.642	7083.2	424016.0	1.7	B31.8	
15000	9094.6	6398.4	1.482	1.642	11119.8	429031.8	2.6	B31.8	
15000	52.2	0.0	1.482	1.642	52.2	430486.7	0.0	B31.8	
379	16.6	0.0	1.000	1.000	16.6	430516.8	0.0	B31.8	
379	16.6	0.0	1.000	1.000	16.6	430516.8	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
380	0.0	0.0	1.000	1.000	0.0	430541.5	0.0	B31.8	
15000	43627.4	7714.7	1.482	1.642	44304.3	425969.3	10.4	B31.8	
382	11946.8	7714.7	1.000	1.000	14221.1	427417.0	3.3	B31.8	
382	11946.8	7714.7	1.000	1.000	14221.1	427417.0	3.3	B31.8	
383	8067.5	7714.7	1.000	1.000	11162.5	428277.9	2.6	B31.8	
383	8067.5	7714.7	1.000	1.000	11162.5	428281.9	2.6	B31.8	
1008	23231.9	7714.7	1.000	1.000	24479.4	428219.8	5.7	B31.8	
1008	44782.0	7714.7	2.004	1.670	45441.7	427450.1	10.6	B31.8	
1009	51793.4	14021.5	2.004	1.670	53657.8	425563.5	12.6	B31.8	
1009	51793.4	14021.5	2.004	1.670	53657.8	425563.5	12.6	B31.8	
1010	52904.0	13001.3	2.004	1.670	54478.1	419684.2	13.0	B31.8	
	26621.	13001	1.00	1.00	29627.	423266.	7.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
1010	9	.3	0	0	0	0			
980	26584.6	13001.3	1.000	1.000	29593.5	423212.9	7.0	B31.8	
980	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
970	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
970	3501.4	7640.3	1.000	1.000	8404.4	440954.8	1.9	B31.8	
958	3487.0	7640.3	1.000	1.000	8398.4	440997.2	1.9	B31.8	
958	4007.2	7640.3	1.315	1.096	8627.3	439789.8	2.0	B31.8	
959	6784.8	3829.3	1.315	1.096	7790.8	438184.0	1.8	B31.8	
959	6784.8	3829.3	1.315	1.096	7790.8	438184.0	1.8	B31.8	
960	7188.5	1030.9	1.315	1.096	7262.0	435828.0	1.7	B31.8	
960	6281.4	1030.9	1.000	1.000	6365.5	438009.1	1.5	B31.8	
965	10639.1	1030.9	1.000	1.000	10689.0	431490.2	2.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
965	10639.1	1030.9	1.000	1.000	10689.0	431490.2	2.5	B31.8	
910	32519.8	1030.9	1.033	1.044	32536.1	436664.9	7.5	B31.8	
80	44086.8	2257.0	3.577	3.577	44144.5	347238.8	12.7	B31.8	
81	8350.8	2257.0	1.000	1.000	8650.4	368352.3	2.3	B31.8	
81	8350.8	2257.0	1.000	1.000	8650.4	368352.3	2.3	B31.8	
83	21740.7	2257.0	3.577	3.577	21857.5	357442.6	6.1	B31.8	
83	390020.7	31912.5	3.577	3.577	391324.1	426711.8	91.7	B31.8	
2199	20797.4	40319.6	2.065	1.721	45367.4	426195.1	10.6	B31.8	
2199	20797.4	40319.6	2.065	1.721	45367.4	426195.1	10.6	B31.8	
2200	47419.0	29433.7	2.065	1.721	55811.3	425404.6	13.1	B31.8	
2200	26663.4	29433.7	1.000	1.000	39715.0	426630.6	9.3	B31.8	
2205	10321.2	29433.7	1.000	1.000	31190.9	423534.6	7.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2205	10321.2	29433.7	1.000	1.000	31190.9	423534.6	7.4	B31.8	
2211	99399.5	24206.4	2.065	1.721	102304.5	427815.3	23.9	B31.8	
2211	99399.5	24206.4	2.065	1.721	102304.5	427815.3	23.9	B31.8	
2210	107636.6	6222.2	2.065	1.721	107816.3	427765.8	25.2	B31.8	
2210	54210.0	6222.2	1.000	1.000	54565.9	428208.5	12.7	B31.8	
2214	57550.9	1184.9	2.065	1.721	57563.1	427782.4	13.5	B31.8	
2214	57550.9	1184.9	2.065	1.721	57563.1	427782.4	13.5	B31.8	
2215	44995.8	3123.6	2.065	1.721	45104.1	427210.8	10.6	B31.8	
2215	21886.2	3123.6	1.000	1.000	22108.0	427672.2	5.2	B31.8	
2220	23483.1	3123.6	1.000	1.000	23689.9	422068.7	5.6	B31.8	
2220	23483.1	3123.6	1.000	1.000	23689.9	422068.7	5.6	B31.8	
	81705.	3123.	1.51	1.69	81765.	425793.	19.2	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2225	3	6	8	1	0	9			
83	24461.1	149.3	3.577	3.577	24461.5	357421.9	6.8	B31.8	
105	5291.0	149.3	1.000	1.000	5293.1	370570.2	1.4	B31.8	
105	5291.0	149.3	1.000	1.000	5293.1	370570.2	1.4	B31.8	
110	4405.8	149.3	1.000	1.000	4408.4	374865.2	1.2	B31.8	
110	4405.8	149.3	1.000	1.000	4408.4	374865.2	1.2	B31.8	
85	23534.3	149.3	2.464	2.952	23534.8	375592.5	6.3	B31.8	
85	17202.3	621.3	2.464	2.952	17213.5	417944.3	4.1	B31.8	
338	4399.6	621.3	1.000	1.000	4443.3	429172.5	1.0	B31.8	
338	7329.9	621.3	1.966	1.639	7356.2	424779.3	1.7	B31.8	
339	3116.4	3016.5	1.966	1.639	4337.3	425522.3	1.0	B31.8	
339	3116.4	3016.5	1.966	1.639	4337.3	425522.3	1.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
360	3536.9	2820.2	1.966	1.639	4523.6	427037.0	1.1	B31.8	
360	2119.7	2820.2	1.000	1.000	3528.0	428243.5	0.8	B31.8	
341	9039.0	2166.4	1.966	1.639	9295.0	426136.9	2.2	B31.8	
341	9039.0	2166.4	1.966	1.639	9295.0	426136.9	2.2	B31.8	
340	10961.0	71.0	1.966	1.639	10961.2	425532.5	2.6	B31.8	
340	5834.1	71.0	1.000	1.000	5834.5	426834.3	1.4	B31.8	
346	6135.7	71.0	1.000	1.000	6136.1	427250.5	1.4	B31.8	
346	6135.7	71.0	1.000	1.000	6136.1	427250.1	1.4	B31.8	
349	6892.8	71.0	1.000	1.000	6893.2	428109.4	1.6	B31.8	
349	6892.8	71.0	1.000	1.000	6893.2	428109.4	1.6	B31.8	
350	13834.8	71.0	1.482	1.642	13835.0	428587.1	3.2	B31.8	
	61176.	7669.	1.51	1.69	61655.	426756.	14.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2225	4	0	8	1	2	0			
2300	61266.5	7669.0	1.518	1.691	61744.6	427037.5	14.5	B31.8	
2300	79600.8	4031.1	1.518	1.691	79702.8	436858.6	18.2	B31.8	
3200	4262.9	4031.1	1.000	1.000	5867.0	437709.7	1.3	B31.8	
3200	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3210	34106.9	4031.1	1.000	1.000	34344.3	437077.7	7.9	B31.8	
3220	52484.3	4031.1	1.000	1.000	52638.9	436954.1	12.0	B31.8	
3220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3250	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3250	53090.7	15913.1	1.854	1.854	55424.2	431860.3	12.8	B31.8	
3260	11742.4	3821.7	1.854	1.854	12348.6	407932.8	3.0	B31.8	
3260	6334.6	-1910.8	1.000	1.000	7398.1	342047.7	2.2	B31.3	
3280	5742.7	1910.8	1.000	1.000	6898.1	340853.8	2.0	B31.3	
3280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3290	12156.3	-1910.8	2.919	2.433	12742.9	337112.8	3.8	B31.3	
3299	13759.1	222.1	2.919	2.433	13766.3	341881.4	4.0	B31.3	
3299	13759.1	-222.1	2.919	2.433	13766.3	341881.4	4.0	B31.3	
3300	8162.0	-1255.4	2.919	2.433	8539.5	340244.2	2.5	B31.3	
3300	3158.0	1255.4	1.000	1.000	4034.4	342801.3	1.2	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3309	2105.5	-1388.1	2.919	2.433	3484.2	327875.4	1.1	B31.3	
3309	2104.6	1388.1	2.919	2.433	3483.7	327882.2	1.1	B31.3	
3310	7210.4	-887.8	2.919	2.433	7425.8	327503.2	2.3	B31.3	
3310	2683.1	887.8	1.000	1.000	3217.4	338443.8	1.0	B31.3	
3320	25225.2	-691.4	6.043	7.724	25287.6	295090.9	8.6	B31.3	
2300	59770.1	3656.3	1.518	1.691	59881.8	300084.3	20.0	B31.8	
2310	9730.3	3656.3	1.518	1.691	10394.6	300161.7	3.5	B31.8	
2310	56685.9	2194.2	1.518	1.691	56728.3	439004.9	12.9	B31.8	
2320	4901.8	2194.2	1.000	1.000	5370.5	438387.1	1.2	B31.8	
2320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2500	26375.6	2194.2	1.000	1.000	26466.7	437169.5	6.1	B31.8	
2504	39762.8	2194.2	1.000	1.000	39823.3	436689.2	9.1	B31.8	
2504	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2508	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
2510	36391.3	16231.8	1.854	1.854	39847.1	431923.5	9.2	B31.8	
2520	8254.3	3898.2	1.854	1.854	9128.5	407971.7	2.2	B31.8	
2520	4452.9	-1949.1	1.000	1.000	5918.1	342145.5	1.7	B31.3	
2540	4234.6	1949.1	1.000	1.000	5755.7	340964.6	1.7	B31.3	
2540	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
2545	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2545	11834.0	-1949.1	2.919	2.433	12459.6	337371.8	3.7	B31.3	
2551	14490.7	659.9	2.919	2.433	14550.6	341663.7	4.3	B31.3	
2551	14399.9	-659.9	2.919	2.433	14460.2	341679.4	4.2	B31.3	
2550	11584.4	-827.3	2.919	2.433	11702.0	340243.5	3.4	B31.3	
2550	4336.3	827.3	1.000	1.000	4641.3	342821.5	1.4	B31.3	
2548	3153.4	-827.3	1.000	1.000	3561.1	340299.3	1.0	B31.3	
2548	9273.6	799.6	2.919	2.433	9410.5	333444.8	2.8	B31.3	
2549	5501.1	-738.6	2.919	2.433	5696.0	328451.0	1.7	B31.3	
2549	5501.1	738.6	2.919	2.433	5696.0	328451.1	1.7	B31.3	
2555	3616.7	-358.9	2.919	2.433	3687.3	328175.3	1.1	B31.3	
2555	1408.0	358.9	1.000	1.000	1580.4	338679.7	0.5	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2560	9345.0	-279.5	6.043	7.724	9372.5	294796.0	3.2	B31.3	
2560	13260.2	-0.0	6.043	7.724	13260.2	344189.6	3.9	B31.3	
6120	1620.9	0.0	1.000	1.000	1620.9	344439.7	0.5	B31.3	
3120	10304.8	-0.0	6.043	7.724	10304.8	342412.3	3.0	B31.3	
3320	10638.5	0.0	6.043	7.724	10638.5	342412.4	3.1	B31.3	
3320	11378.9	-0.0	6.043	7.724	11378.9	343713.2	3.3	B31.3	
6120	1620.9	0.0	1.000	1.000	1620.9	344439.7	0.5	B31.3	
3120	12521.0	0.0	6.043	7.724	12521.0	330797.9	3.8	B31.3	
5260	1471.4	-0.0	1.000	1.000	1471.4	343445.2	0.4	B31.3	
5260	1471.4	0.0	1.000	1.000	1471.4	343445.2	0.4	B31.3	
6100	1267.3	0.0	1.000	1.000	1267.3	337232.3	0.4	B31.3	
	1267.3	0.0	1.00	1.00	1267.3	337232.	0.4	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
6100			0	0		3			
6110	0.0	0.0	1.000	1.000	0.0	344534.3	0.0	B31.3	
5620	0.4	0.0	6.043	7.724	0.4	331925.4	0.0	B31.3	
6130	0.0	-0.0	1.000	1.000	0.0	344534.3	0.0	B31.3	
2225	20053.4	5393.9	1.518	1.691	20766.1	426670.8	4.9	B31.8	
2240	19642.2	5393.9	1.518	1.691	20369.4	427635.7	4.8	B31.8	
2240	106289.9	5629.2	1.518	1.691	106438.9	437656.9	24.3	B31.8	
3000	9437.5	5629.2	1.000	1.000	10988.8	438230.8	2.5	B31.8	
3000	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3010	51337.0	5629.2	1.000	1.000	51644.7	437430.7	11.8	B31.8	
3020	77098.3	5629.2	1.000	1.000	77303.6	437196.9	17.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3040	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
3050	74997.8	23959.5	1.854	1.854	78732.0	432602.1	18.2	B31.8	
3060	16351.6	5754.1	1.854	1.854	17334.5	408078.9	4.2	B31.8	
3060	8821.1	-2877.1	1.000	1.000	10531.9	342206.9	3.1	B31.3	
3080	7847.2	2877.1	1.000	1.000	9730.8	340978.8	2.9	B31.3	
3080	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.3	
3090	16135.8	-2877.1	2.919	2.433	17131.1	337140.7	5.1	B31.3	
	18829.	733.8	2.91	2.43	18886.	342277.	5.5	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
3099	4		9	3	5	4			
3099	18829.4	-733.8	2.919	2.433	18886.5	342277.4	5.5	B31.3	
3100	11997.6	-1279.3	2.919	2.433	12267.4	339880.5	3.6	B31.3	
3100	4626.2	1279.3	1.000	1.000	5286.6	342649.5	1.5	B31.3	
3108	2358.0	-1279.3	1.000	1.000	3479.5	340145.3	1.0	B31.3	
3108	6493.5	1279.3	2.919	2.433	6979.4	332819.6	2.1	B31.3	
3109	2713.5	-1501.9	2.919	2.433	4047.9	327702.6	1.2	B31.3	
3109	2713.5	1501.9	2.919	2.433	4047.9	327702.7	1.2	B31.3	
3110	9430.7	-1038.0	2.919	2.433	9656.5	327551.0	2.9	B31.3	
3110	3396.7	1038.0	1.000	1.000	3980.9	338460.8	1.2	B31.3	
3120	36374.9	-808.4	6.043	7.724	36434.1	295678.8	12.3	B31.3	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
2240	0.0	0.0	1.518	1.691	0.0	428536.4	0.0	B31.8	
5000	0.0	0.0	1.000	1.000	0.0	428836.9	0.0	B31.8	
85	23909.9	799.8	2.464	2.952	23923.2	373825.9	6.4	B31.8	
89	28476.9	277.0	2.063	1.720	28478.3	376692.3	7.6	B31.8	
89	28476.9	277.0	2.063	1.720	28478.3	376692.3	7.6	B31.8	
90	19055.3	112.9	2.063	1.720	19055.7	376739.7	5.1	B31.8	
90	9235.0	112.9	1.000	1.000	9235.7	376827.5	2.5	B31.8	
100	9141.1	112.9	1.000	1.000	9141.8	376831.0	2.4	B31.8	
100	9141.1	112.9	1.000	1.000	9141.8	376831.8	2.4	B31.8	
101	6288.6	112.9	1.000	1.000	6289.6	376615.2	1.7	B31.8	
101	12958.6	112.9	2.063	1.720	12959.1	376439.8	3.4	B31.8	
	27295.	335.9	2.06	1.72	27297.	376388.	7.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
102	0		3	0	1	6			
102	27295.0	335.9	2.063	1.720	27297.1	376389.2	7.3	B31.8	
9100	27542.2	570.3	2.063	1.720	27548.1	376721.3	7.3	B31.8	
9100	13348.0	570.3	1.000	1.000	13360.1	376805.6	3.5	B31.8	
9101	610.0	570.3	1.000	1.000	835.0	376475.9	0.2	B31.8	
9101	610.0	570.3	1.000	1.000	835.0	376476.7	0.2	B31.8	
11000	2895.4	570.3	1.000	1.000	2951.1	376745.8	0.8	B31.8	
11000	2895.4	570.3	1.000	1.000	2951.1	376747.0	0.8	B31.8	
11010	348.2	570.3	1.000	1.000	668.1	376909.2	0.2	B31.8	
11010	348.2	570.3	1.000	1.000	668.1	376910.8	0.2	B31.8	
11020	241.2	570.3	1.000	1.000	619.2	376936.3	0.2	B31.8	
11020	241.2	570.3	1.000	1.000	619.2	376937.7	0.2	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11030	2643.5	570.3	1.000	1.000	2704.3	376888.8	0.7	B31.8	
11030	2643.5	570.3	1.000	1.000	2704.3	376890.3	0.7	B31.8	
11040	7128.0	570.3	1.000	1.000	7150.8	376394.4	1.9	B31.8	
11040	7128.0	570.3	1.000	1.000	7150.8	376395.2	1.9	B31.8	
11041	12410.9	570.3	1.000	1.000	12423.9	376814.1	3.3	B31.8	
11041	25608.0	570.3	2.063	1.720	25614.3	376743.6	6.8	B31.8	
11042	24337.7	556.3	2.063	1.720	24344.0	376576.7	6.5	B31.8	
11042	24337.7	556.3	2.063	1.720	24344.0	376576.3	6.5	B31.8	
9110	9542.8	276.9	2.063	1.720	9546.8	376492.9	2.5	B31.8	
9110	4632.0	276.9	1.000	1.000	4640.2	376629.2	1.2	B31.8	
9119	998.4	276.9	1.000	1.000	1036.1	376670.1	0.3	B31.8	
	998.4	276.9	1.00	1.00	1036.1	376670.	0.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9119			0	0		1			
9120	10498.6	276.9	1.000	1.000	10502.3	376677.1	2.8	B31.8	
9120	21658.8	276.9	2.063	1.720	21660.5	376602.8	5.8	B31.8	
9129	31248.4	464.1	2.063	1.720	31251.8	376480.2	8.3	B31.8	
9129	31248.4	464.1	2.063	1.720	31251.8	376480.2	8.3	B31.8	
9130	27828.0	385.6	2.063	1.720	27830.7	375380.8	7.4	B31.8	
9130	13487.2	385.6	1.000	1.000	13492.7	375955.6	3.6	B31.8	
10070	13426.0	385.6	1.000	1.000	13431.5	375941.3	3.6	B31.8	
10070	13426.0	385.6	1.000	1.000	13431.5	375941.3	3.6	B31.8	
10080	6465.3	385.6	1.000	1.000	6476.8	373951.9	1.7	B31.8	
10080	6465.3	385.6	1.000	1.000	6476.8	373951.9	1.7	B31.8	
9140	962.1	385.6	1.000	1.000	1036.5	371048.4	0.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9140	962.1	385.6	1.000	1.000	1036.5	371048.4	0.3	B31.8	
9150	5537.1	385.6	1.000	1.000	5550.5	368829.8	1.5	B31.8	
9150	5537.1	385.6	1.000	1.000	5550.5	368829.8	1.5	B31.8	
9160	12376.0	385.6	2.464	2.952	12382.0	375284.7	3.3	B31.8	
9160	16623.8	1923.8	2.464	2.952	16734.7	366840.9	4.6	B31.8	
9180	4570.3	1923.8	1.000	1.000	4958.7	374136.7	1.3	B31.8	
9180	8592.8	1923.8	1.880	1.880	8805.5	372943.6	2.4	B31.8	
9190	10749.3	4966.5	1.880	1.880	11841.2	396044.8	3.0	B31.8	
9190	12601.9	4966.5	2.205	1.838	13545.2	354881.2	3.8	B31.8	
9199	5751.7	3541.7	2.205	1.838	6754.7	357671.5	1.9	B31.8	
9199	5751.7	3541.7	2.205	1.838	6754.7	357671.5	1.9	B31.8	
9200	8381.9	590.0	2.205	1.838	8402.6	353025.2	2.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9200	4405.7	590.0	1.000	1.000	4445.1	355005.2	1.3	B31.8	
9210	4396.9	590.0	1.000	1.000	4436.3	354956.9	1.2	B31.8	
9210	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9220	3941.7	590.0	1.000	1.000	3985.6	352954.6	1.1	B31.8	
9230	1823.9	590.0	1.000	1.000	1916.9	346463.2	0.6	B31.8	
9230	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9240	1770.4	590.0	1.000	1.000	1866.2	353796.4	0.5	B31.8	
9250	2891.6	590.0	1.000	1.000	2951.2	349199.2	0.8	B31.8	
9250	2891.6	590.0	1.000	1.000	2951.2	349199.2	0.8	B31.8	
	2508.4	590.0	1.00	1.00	2576.9	353214.	0.7	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9280			0	0		7			
9280	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9290	2333.3	590.0	1.000	1.000	2406.7	354451.2	0.7	B31.8	
9300	997.4	590.0	1.000	1.000	1158.9	354484.5	0.3	B31.8	
9300	997.4	590.0	1.000	1.000	1158.9	354484.5	0.3	B31.8	
9310	791.4	590.0	2.428	2.428	987.1	346147.1	0.3	B31.8	
9310	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9320	297.0	590.0	1.000	1.000	660.5	352471.5	0.2	B31.8	
9330	765.3	590.0	2.071	2.428	966.4	356369.6	0.3	B31.8	
9330	5568.8	267.6	2.071	2.428	5575.2	341015.1	1.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9340	4269.1	267.6	2.071	2.428	4277.4	354151.4	1.2	B31.8	
9340	0.0	0.0	2.071	2.428	0.0	358725.6	0.0	B31.8	
9345	0.0	0.0	1.000	1.000	0.0	358998.2	0.0	B31.8	
9340	4215.4	385.8	2.071	2.428	4233.0	355486.8	1.2	B31.8	
9350	1965.8	385.8	1.000	1.000	2003.3	355354.1	0.6	B31.8	
9350	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9360	1698.9	385.8	1.000	1.000	1742.1	345924.4	0.5	B31.8	
9370	914.5	385.8	1.000	1.000	992.5	348099.5	0.3	B31.8	
9370	914.5	385.8	1.000	1.000	992.5	348099.5	0.3	B31.8	
9378	636.9	385.8	1.000	1.000	744.7	358904.8	0.2	B31.8	
	1297.8	385.8	2.20	1.83	1354.0	356272.	0.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9378			5	8		1			
9379	1530.5	578.3	2.205	1.838	1636.1	356161.0	0.5	B31.8	
9379	1530.5	578.3	2.205	1.838	1636.1	356161.0	0.5	B31.8	
9380	2524.5	419.5	2.205	1.838	2559.1	356472.1	0.7	B31.8	
9380	1166.6	419.5	1.000	1.000	1239.7	357302.8	0.3	B31.8	
9390	5456.9	419.5	2.071	2.428	5473.0	352672.7	1.6	B31.8	
9330	5664.8	110.6	2.071	2.428	5665.8	350736.1	1.6	B31.8	
9335	2778.0	110.6	1.000	1.000	2780.2	346340.2	0.8	B31.8	
9335	2778.0	110.6	1.000	1.000	2780.2	346340.2	0.8	B31.8	
9500	2791.1	110.6	1.000	1.000	2793.2	348833.6	0.8	B31.8	
9500	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9510	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9510	6430.6	110.6	2.205	1.838	6431.5	351248.5	1.8	B31.8	
9519	1304.8	162.0	2.205	1.838	1314.8	351197.8	0.4	B31.8	
9519	1304.8	162.0	2.205	1.838	1314.8	351197.8	0.4	B31.8	
9520	11235.3	134.3	2.205	1.838	11236.1	351533.5	3.2	B31.8	
9520	5094.7	134.3	1.000	1.000	5096.4	354516.8	1.4	B31.8	
9530	5175.3	134.3	1.000	1.000	5177.0	354549.4	1.5	B31.8	
9530	9730.2	134.3	1.880	1.880	9731.2	351453.7	2.8	B31.8	
9550	8469.5	52.0	1.880	1.880	8469.6	333872.4	2.5	B31.8	
9550	4504.7	52.0	1.000	1.000	4505.0	376335.4	1.2	B31.8	
9560	16747.3	52.0	2.464	2.952	16747.4	375082.1	4.5	B31.8	
9560	698.5	12.0	2.464	2.952	698.6	375522.9	0.2	B31.8	
9900	997.9	12.0	2.464	2.952	998.0	367759.6	0.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9900	0.0	0.0	2.464	2.952	0.0	426283.2	0.0	B31.8	
10000	0.0	0.0	1.000	1.000	0.0	426736.0	0.0	B31.8	
9900	997.9	12.0	2.464	2.952	998.0	367760.2	0.3	B31.8	
9910	3800.3	12.0	1.000	1.000	3800.4	374913.6	1.0	B31.8	
9910	3800.3	12.0	1.000	1.000	3800.4	374913.6	1.0	B31.8	
9920	7437.5	12.0	1.000	1.000	7437.5	376410.2	2.0	B31.8	
9920	15346.3	12.0	2.063	1.720	15346.3	376095.1	4.1	B31.8	
9951	14503.6	78.5	2.063	1.720	14503.8	376793.6	3.8	B31.8	
9951	14503.6	78.5	2.063	1.720	14503.8	376793.6	3.8	B31.8	
9950	3137.1	105.0	2.063	1.720	3138.8	376846.7	0.8	B31.8	
9950	1520.3	105.0	1.000	1.000	1524.0	376878.4	0.4	B31.8	
	1429.2	105.0	1.00	1.00	1433.0	376879.	0.4	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9960			0	0		4			
9960	1429.2	105.0	1.000	1.000	1433.0	376879.5	0.4	B31.8	
9961	5265.8	105.0	1.000	1.000	5266.8	376878.0	1.4	B31.8	
9961	10865.5	105.0	2.063	1.720	10866.0	376831.3	2.9	B31.8	
9962	16630.6	72.5	2.063	1.720	16630.8	376837.1	4.4	B31.8	
9962	16630.6	72.5	2.063	1.720	16630.8	376837.4	4.4	B31.8	
10010	13691.1	0.0	2.063	1.720	13691.1	376867.1	3.6	B31.8	
10010	6635.4	0.0	1.000	1.000	6635.4	376895.1	1.8	B31.8	
10011	1147.5	0.0	1.000	1.000	1147.5	376818.3	0.3	B31.8	
10011	1147.5	0.0	1.000	1.000	1147.5	376819.6	0.3	B31.8	
10012	2261.1	0.0	1.000	1.000	2261.1	376862.6	0.6	B31.8	
10012	2261.1	0.0	1.000	1.000	2261.1	376863.8	0.6	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
11100	1915.0	0.0	1.000	1.000	1915.0	376926.5	0.5	B31.8	
11100	1915.0	0.0	1.000	1.000	1915.0	376929.1	0.5	B31.8	
11110	3.6	0.0	1.000	1.000	3.6	376991.2	0.0	B31.8	
11110	3.6	0.0	1.000	1.000	3.6	376993.3	0.0	B31.8	
10020	2.0	0.0	1.000	1.000	2.0	376993.3	0.0	B31.8	
10020	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
10029	1.0	0.0	1.000	1.000	1.0	376993.4	0.0	B31.8	
10030	0.0	0.0	1.000	1.000	0.0	376993.4	0.0	B31.8	
9560	16595.8	178.9	2.464	2.952	16596.8	375354.7	4.4	B31.8	
9580	4568.2	178.9	1.000	1.000	4571.7	376772.2	1.2	B31.8	
	8588.8	178.9	1.88	1.88	8590.7	375974.	2.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9580			0	0		1			
9590	10706.6	461.9	1.880	1.880	10716.6	397730.6	2.7	B31.8	
9590	12555.3	461.9	2.205	1.838	12563.8	356478.8	3.5	B31.8	
9599	709.9	543.8	2.205	1.838	894.2	355529.9	0.3	B31.8	
9599	709.9	543.8	2.205	1.838	894.2	355529.9	0.3	B31.8	
9600	4146.3	396.2	2.205	1.838	4165.2	355037.3	1.2	B31.8	
9600	1887.9	396.2	1.000	1.000	1929.0	356158.3	0.5	B31.8	
9610	1886.9	396.2	1.000	1.000	1928.0	356157.3	0.5	B31.8	
9610	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9620	1710.0	396.2	1.000	1.000	1755.3	348304.0	0.5	B31.8	
9622	1691.7	396.2	1.000	1.000	1737.5	344875.4	0.5	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9622	1691.7	396.2	1.000	1.000	1737.5	344875.4	0.5	B31.8	
9624	1673.1	396.2	1.000	1.000	1719.4	346406.8	0.5	B31.8	
9624	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9627	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9627	1630.6	396.2	1.000	1.000	1678.0	349327.1	0.5	B31.8	
9630	1400.1	396.2	1.000	1.000	1455.1	357572.1	0.4	B31.8	
9630	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9640	1368.8	396.2	1.000	1.000	1425.0	356796.6	0.4	B31.8	
9650	1338.1	396.2	1.000	1.000	1395.5	356586.7	0.4	B31.8	
9650	1338.1	396.2	1.000	1.000	1395.5	356586.7	0.4	B31.8	
9660	1063.5	396.2	1.000	1.000	1134.9	355675.2	0.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9660	1063.5	396.2	1.000	1.000	1134.9	355675.2	0.3	B31.8	
9670	2069.7	396.2	1.000	1.000	2107.3	358847.8	0.6	B31.8	
9670	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9680	2246.0	396.2	1.000	1.000	2280.7	358068.9	0.6	B31.8	
9690	3015.6	396.2	1.000	1.000	3041.5	350432.1	0.9	B31.8	
9690	3015.6	396.2	1.000	1.000	3041.5	350432.1	0.9	B31.8	
9390	4626.0	396.2	2.071	2.428	4642.9	358255.9	1.3	B31.8	
9390	7794.3	864.5	2.071	2.428	7842.1	355859.5	2.2	B31.8	
9710	3072.4	864.5	1.000	1.000	3191.7	355492.5	0.9	B31.8	
9710	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
	0.0	0.0	0.00	0.00	0.0	0.0	0.0	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9720			0	0					
9720	3042.8	864.5	1.000	1.000	3163.3	348951.4	0.9	B31.8	
9730	4595.7	864.5	1.000	1.000	4676.3	352896.7	1.3	B31.8	
9730	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	0.0	0.0	0.000	0.000	0.0	0.0	0.0	B31.8	
9800	10200.1	864.5	2.205	1.838	10236.6	352680.7	2.9	B31.8	
9809	6547.4	4151.3	2.205	1.838	7752.5	356996.0	2.2	B31.8	
9809	6547.4	4151.3	2.205	1.838	7752.5	356996.0	2.2	B31.8	
9810	11717.8	5844.3	2.205	1.838	13094.4	355652.3	3.7	B31.8	
9810	5322.5	5844.3	1.000	1.000	7904.7	356654.9	2.2	B31.8	
9820	5404.9	5844.3	1.000	1.000	7960.5	356601.4	2.2	B31.8	
9820	10162.0	5844.3	1.880	1.880	11722.7	355507.6	3.3	B31.8	

NODE	Bending Stress KPa	Torsion Stress KPa	SIF In Plane	SIF Out Plane	Code Stress KPa	Allowable Stress KPa	Ratio %	Piping Code	
9840	8750.4	2263.8	1.880	1.880	9038.5	331996.1	2.7	B31.8	
9840	4654.1	2263.8	1.000	1.000	5175.5	374347.4	1.4	B31.8	
9160	17343.9	2263.8	2.464	2.952	17491.0	367356.4	4.8	B31.8	
2310	0.0	0.0	1.518	1.691	0.0	428813.3	0.0	B31.8	
6000	0.0	0.0	1.000	1.000	0.0	428836.9	0.0	B31.8	

8.2 MODELO 3D

8.3 ISOMÉTRICOS

8.4 SOPORTES

8.5 PQR WPS Y EJEMPLO DE WELDING MAP